THE

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THE CENTRAL COUNCIL FOR HEALTH EDUCATION

THE CENTRAL COUNCIL FOR HEALTH EDUCATION

Tavistock House, Tavistock Square, London, W.C.1

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THE

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A QUARTERLY FOR ALL WHO ARE INTERESTED IN HEALTH

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THE BABY AND THE BATH WATER

SHOULD government departments do educational and propaganda work?

This question is often posed as a matter of principle, and it is being raised at present to give debating strength to some of the more controversial aspects of Mr. Butler's economic policy. The democratic sentimentalist sees peril in any attempt by governments to guide public opinion, largely because he does not believe that government guidance will be disinterested, and in many countries it is even automatically assumed that government propaganda is synonymous with deception. Other political philosophies, usually termed authoritarian, start off with the assumption that there is a "right" answer to every problem; that it is the duty of governments to find it and when they have found it that everyone should be informed with one voice.

The first attitude frequently ends in intellectual paralysis, the second in dynamic canters down blind alleys.

British governments, even those which claim to be founded on principles, have been distinguished philosophically for their robust opportunism, and thus are able to adopt either attitude as expediency appears to demand. To consider as a matter of principle the right or duty of the government of this country to influence its people in any particular way is therefore asking the wrong question. Our experience of guidance in the health field has been a happy one and the humanist and taxpayer may be well pleased with the relief of suffering and taxation he has bought for a pittance. It is therefore with apprehension and dismay that we regard the chosen economies which will inevitably wound most severely such preventive activities as health education. In these circumstances the only relevant question is whether the small sums which it is planned to save are sound expediency.

Let us consider the misfortunes which have gradually overtaken the Ministry of Food. Between the wars, that is, no more than twenty years ago, our country's nutrition was causing alarm to alert and far-sighted thinkers such as Orr and Drummond. The publication of their researches and the enlightenment and enthusiasm they produced among health and welfare workers laid the foundation of one of the most important Health Education movements of our or any other time.

The period up to 1939 was marked by numerous voluntary experiments in school meals, the diet of recruits and the nutrition of pregnant and nursing mothers, which established beyond doubt the Needs and the Solutions and provided the professional workers with that "resonance of conviction" which has sustained their nutritional teaching ever since. The Ministry of Food came into being on the crescendo of this movement and from its inception adopted the most enlightened nutritional policy: it acted as if research, education and publicity were essential ingredients of nutrition policy. An event of the utmost significance had come about. Nutrition research and research into the practical questions of individual cooking and large-scale food preparation had been brought under the same roof as the buying and selective distribution of food and the educational task of improving and developing the nation's taste and changing its feeding habits.

Few will deny that this administrative triumph of the Civil Service was entitled to claim many of the laurels for the cheerful state of the nation's health since 1939. With the closing of the Education Sections of the Ministry of Food and the discontinuation of the magazine *Food and Nutrition*, demolition work which has been proceeding under

the hammer of economy for some years is now complete. Though this is perhaps the unkindest cut of which we are aware, it seems that the axe is being wielded with enthusiasm among all the departments concerned with enlightenment. The closing of the Crown Film Unit, which set such high standards of documentary and instructional film production, will be felt in time; the closing of the mobile projection units of the Central Office of Information, an educational service unique in the world, will be felt immediately, particularly by voluntary organisations among which so much popular education is carried on and whose budgets do not permit the hiring of projectors and projectionists. The Ministry of Health, whose educational potential is immense, has struggled for some years with shrinking budgets for this side of its work and appears again to have felt the steel.

It is curious and perhaps ominous coincidence that the World Health Organisation should have chosen this month to place on our desks, and I presume on that of Mr. Butler, their latest monograph, entitled *The Cost of Sickness and the Price of Health.** This summary of the investment value of preventive medicine on both physical and psychological planes is a welcome weapon with which to confront those who think that sound economy lies entirely in balancing an annual budget.

In every section of this work Health Education is considered as an integral part of any programme of preventive medicine. The social values in terms of economics, illness and longevity which result from the relative investments in sound public health policies are discussed in relation to the practices of various nations. Though the health problems of primitive and of advanced societies are different, no society is so advanced that it can long prefer the expense of physic to the economy of prophylaxis.

Though the United Kingdom is among the most advanced societies, the infantile mortality in the labouring classes is still four times as great as among the professional classes. The burden of psychological illness seems to grow in spite of or because of our advances in other social fields. The techniques of preventive medicine have not yet been turned to this aspect of disease, and we continue to be forced into the profligacy of costly therapeutics which are by the very nature and size of the problem often too little and too late.

The exploration of this field from the epidemiological, prophylactic and educational aspects appears to us to be a logical road for preventive medicine to take and it is for this reason that the Central Council for Health Education is holding a Seminar mainly for Medical Officers from 18th to 22nd April to discuss the Rôle of Health Education in Mental Health work.

Considering the extent of these new needs in preventive medicine and the present ignorance of people about all health matters, we are driven to ask: can a hardworking hard-up country such as ours afford these economies?

The Central Council will naturally endeavour through its various sections to fill the vacuum which will be caused by the withdrawal of central services and publications, but it is to local authorities of all kinds that the new challenge presents a great opportunity to make fuller use of their health educational powers. If the challenge is not met we may have to reframe the question and ask: will our children be able to afford the consequences of our failure?

**The Cost of Sickness and the Price of Health*, by C. E. A. Winslow. W.H.O., Geneva. 1951. Price 7s. 6d.

HEALTH EDUCATION AT AN ATOMIC ENERGY RESEARCH LABORATORY*

by JEAN SPENCER FELTON, M.D.,
Medical Director, Oak Ridge National Laboratory, Tennessee.

NEWEST to the world of industry is atomic energy, which in its brief lifetime has altered more staid methodologies in manufacture, armaments, transportation, and power, than has any of man's previously used natural resources. Concomitant with these adaptations of nuclear energy there have appeared gigantic production and research installations serving as centres for the development of materials needed in peace and war, and for the formulation and statement of new scientific truths.

The Setting

These establishments are populated by workers recruited from several countries, with skills varying from the semantics-defying exercises of the theoretical physicist to the more earthy accomplishments of the man behind the spade. It is rare to find these operations in urban areas, so the atomic energy plants are perforce placed in isolated regions, not remote, but definitely rural in character. To man these installations it was necessary to seek employees who were established in permanent peace-time jobs in industry, in universities, or on farms. This meant the cutting of old roots, the moving of families, the adjustment to new and differing culture patterns, and the execution of occupational talents in stages hitherto rarely seen outside the pages of science fiction.

In these new settings, apprehensions appeared. At first the nature of the activity was clothed in total secrecy, so that men accustomed to familiarity with their contribution to a finished commercial product were now working at something they knew not what. The mystery motivated the creation of rumours, and soon startling tales of weird effects of the

*The work outlined in this document was performed under the auspices of the U.S.A. Atomic Energy Commission.

plant processes on the worker appeared to stir up further the fears of the employed groups. Since workers were sworn to the fullest of security measures, the usual after-work talk with wives or husbands could not go on, and the commonly recognised ventilation measures used for relieving tension were thus proscribed. Superimposed upon this frail emotional groundwork, were the wartime shortages of food and specific beverage, so that long market queues and less-favoured meat cuts aided further in the building of tension states.

Oak Ridge, Tennessee, an atom-spawned community once employing 75,000 people, and having at present less than half that number, exemplifies the nuclear energy centres. Dropped onto a rolling hill and ridge countryside is this town of two production plants, a research laboratory, an institute of nuclear studies, and the municipal facilities needed to service the plant workers. In this new area, the transplanted Manhattanite became exposed to the slower living speeds of the Tennesseean, and the Westerner had to learn to live in a climate that had seasons. The Bible Belt had its buckle scratched by the incisive jibes of the less religious. Southern fried chicken became a standard edible to the man from the plains.

The Needs

This then, was the altered setting for the growth of an unusual city. As an overlay to the admixture of ideologies, faiths, occupations, origins, educational levels, and races, is seen the peculiar pattern of the town government which is completely a function of the Atomic Energy Commission, replete with fractured communication lines, and all the tardiness in reaching decisions on community problems. The high living costs of the post-war period, and the settling down of the town to a less glamorous future have all added to the lighting up of smouldering frustrations and insecurities. These states have been augmented by the unusual academically-based class stratification of the residents, worsened by a poorly designed goal-definition in the scheme of living, and intensified by the problems of rearing a great number of children, a result of Oak Ridge's high birth rate. Finally, the stressful state of the world has added its stultifying effects to these frenetic days.

These, therefore, are the building blocks of the emotional structure seen on the job at a research laboratory—a laboratory engaged in reactor design, radioisotope production, fundamental research in nuclear energy approached by all the disciplines of the physical and biological sciences, and other specific activities whose speed of development parallels the blackening of the news headlines. The employees carrying these personalities—adjusted or aberrant—course the gamut of emotional ills, from severe anxiety states and depressions to minor embroilments in the shop.

Such a plant force wants and needs health information in many areas.

Of greatest concern is the desire for clarification of the occupational hazards to which they believe they are subjected. The chemist with the Ph.D. degree is not concerned by a lack of knowledge of the dangers of the work environs, for his training has given him the understanding. The craftsman, the labourer, the laundry attendant, limited in formal education, is fearful of the unknown in the workroom air; he is acutely aware of the academic differential and feels this inadequacy; and finally, knows little of radiation sources or contamination by radioactive materials. His apprehension is real when he reports to the medical director that he believes his acute sinusitis, or his cough, or heat rash, is surely resulting from his job " up there in the hot shop."

The workers with lead—with beryllium—with liquid metals—with solvents—want accurate factual information about the clinical effects of their job exposures, and the preventive measures required to obviate industrial intoxication. A safety-conscious employee group requests information on all undertakings—the family picnic, the summer sun, the scorpion on the back fence, toilet training for Joe Jr., personal hygiene, or physical fitness on the company's baseball diamond.

The Programme for Mental Health

The Health Division of the laboratory has integrated into its general industrial medical programme the sound concepts of good mental hygiene. From the orientation programme of the first week at work, to the exacting search for the psychogenic factors entering the dispensary visit, every effort is expended in demonstrating the worthwhileness of personality integration—the increased effectiveness and productivity of the individual possessed of some insight into his behaviour—the greater happiness resulting from improved skills of living. If research in atomic energy is to progress, the researcher and his service and administrative colleagues must be workers whose jobs provide satisfying experiences day after day. There must be resolution of the inter-personal difficulties and the inter-group conflicts that arise in the industrial scene.

To effect this sharing of beliefs by the employee and the employer in the role of emotions in the group living of industry, the plant physician must expose these groups constantly to the knowledge accruing from studies in the dynamics of behaviour. One method of introducing this material—and maintaining it—is to build a programme in health education on these principles. In the same manner that the geography, history, music or language teacher in school can introduce education in growth into the course as well as the health educator himself, so can the physican at work base his communication of information on a planking of good emotional health.

The " Talk "

At the laboratory the usual tried, and perhaps not so well proved, methods have been employed—the posters, the pamphlets, the exhibits, and the health column in the weekly four-page " slick " *News*. Unusual, though, is the emphasis on the close personal contact with the Health Division through the medium of the talk, frequently super-titled by the employee as the " speech " or the " lecture." This format of information exchange is professionally cherished because it permits a good rapport between physician and employee—a condition not encountered universally in industry. It allows group discussion to develop and, of greatest value, it provides clues to the health needs of certain groups, it allows a free emotional catharsis, and it lessens, with every additional step, the constant hostility of the average employee toward psychological concepts, particularly in their application to him personally.

The first of such sessions of which the laboratory personnel partakes is the Orientation Programme presented at the end of the first week of employment. The Health Division joins the Industrial Relations, Security, Health-Physics, and Safety Divisions in this indoctrination effort. With the use of a series of coloured slides in cartoon characterisation, a description is given of the procedures comprising the pre-placement physical examination, the reasons for their use, and the significance of the results. The second portion is devoted to an outline of the services available to the employee through the Health Division, when the discussion is devoted to the philosophy of the medical director and his staff which motivates the betterment of human relations, the fostering of rehabilitation, the fuller utilisation of the physically impaired, and the greater acceptance and practice of the principles of emotional well-being.

After employment, the new worker discovers that his group, or department, or division meets frequently with the medical director to hear a discussion covering one phase or another of health. These talks are motivated in different ways—many are requested by supervisory personnel when they are confronted with problems relating to medical care, which can best be handled by professional workers. For example, on one occasion the employees in a certain research division wanted information about the special sulfated vegetable oil hand cleaners which were being provided in preference to the usual alkaline or abrasive bar soaps. A meeting was called and a full discussion of skin hygiene in industry was held, when many of the misconceptions about skin care were clarified, and the reasons for using liquid cleansers and neutral scrubbers were given. Eliminating completely the authoritarian approach, one endeavours to present information which can be understood, which can be utilised, and which will stimulate better health attitudes and behaviour. With a greater amount of information comes a greater feeling of security.

When a daily review of the sick call reveals a predominance of cases of enteritis, or sunburn, or athletic injuries, or furunculosis, meetings will be requested by the medical director so that these specific items can be talked over with the employees. An interesting method of determining the needs in health information lay in the joint co-operative effort between the council of the laboratory's trade union and the Health Division. Both groups met in an effort to learn of the areas in health in greatest need of clarification. At a regular meeting of the union, the subject was presented for discussion, and the consensus showed that more information was wanted about (a) radiation, and (b) mental health. Following these suggestions, a programme was developed wherein representatives of the Safety, Health-Physics, and Health Divisions presented a ten-minute discussion each on the following topics:

Safety— safety devices
disaster control
first aid training

Health— results of periodic laboratory examinations
debunking of radiation folklore
treatment of radioactive skin contamination
emergency medical supplies

Health-Physics— definition of radiation field
definition of radioactive contamination
definition of weekly job tolerance levels

This material was presented on nine separate occasions to approximately 70 persons at each session. The meetings were well received, and many of the employees expressed appreciation for the clear outlining of the subject matter. Apprehension was allayed through a direct, forthright, personalised consideration of occupational health problems of considerable concern to the individual worker not conversant with these pertinent operating data. Currently, a series of visual aids is in preparation to assist in the presentation of talks covering the principles of mental health. Each of the meetings was opened and closed by one of the union officers.

Specific job exposures are covered in talks, when a single hazardous material may be discussed from the points of (a) quantities of material used, (b) extent of absorption in industry (c) methods of entry of the material into the body (d) clinical symptoms of absorption and/or intoxication, (e) preventive measures (f) preventive shop practices (g) engineering control and (h) treatment. As an example, one day a lead-burner of longer service than his shop-mates came in to state that his younger confreres were not observing good practices in the manner of handling lead—smoking in the shop, consuming soft drinks in the work area, failing to use exhaust ventilation systems, etc. He could not bring these items to their attention for fear of ostracism and actual lack of compliance.

To meet this need a talk was given on lead, and all the points enumerated above were covered. It is emphasised in all these sessions that hygienic practices are a joint effort, to be executed by the *worker* in the form of good shop and personal sanitation, and the *Health Division* in the offering of periodic blood and urine examinations, and in the provision of lavatory items correct for cleansing, adequate washing and change room facilities, and appropriate engineering control devices with the usual maintenance and performance check services. When a portion of the responsibility for well-being is placed directly upon the employee, he feels that he is sharing in the health preservation programme, and that he is no longer a child in need of total supportive care. The lead-burners gave the talk a good reception and felt better with a clarification of certain points which were moot in their minds.

The same approach was adopted earlier with the introduction of beryllium and its products into the atomic energy installations. Much of the adverse newspaper publicity had begun to appear relative to the deaths of workers in the lamp industry. Employees brought clippings in to the medical director to "inform" him of the dangers inherent in the use of this element. Finally an open discussion was indicated, when an employee was absent for about one month with a slowly resolving pneumonia, erroneously interpreted by his fellow-machinists to be berylliosis. The rumour became so strong, that the patient's permission was secured to talk about him and his condition to some 45 employees engaged in comparable work. The nature of beryllium's clinical effects was discussed, as were all of the jointly-shared protective measures. The chest films of the convalescing employee were demonstrated and all the evidence was submitted negating the impression that he was "the first case." The men left with understanding, appreciation, and with the sense of a burden lifted.

In atomic energy installations, the idea becomes fixed rather readily that radiation is responsible for whatever ill may present itself at the time—be it bacterial, viral, fungal, chemical, or psychogenic in origin. (Mal-caused fears exist also, among male employees, of impotence.) On this basis one has had to reassure many individuals that the sinusitis, or the keratosis, or the bronchitis, or the uncared-for cuticle was not a result of exposure to ionising radiations. As an example, a 23-year-old chemical operator appeared with the early lesions of psoriasis. The other operators envisioned that soon all of them would have psoriasis, and made their fears known to the shop steward—he to the union—the union to the Health Division. So, with the patient present, along with the union secretary, pencil in hand, on one side of the room, and the head of the insurance section on the other, psoriasis, and its lack of relationship to radiation, was discussed to the point of complete clarification. It was understood that here was a condition not brought about by job contact,

and one that would not afflict the other operators. With explanatory detail being given freely, honestly, and without solicitation, the air was cleared of apprehension—the production-slowing, morale-lowering, panic-producing element in all industrial sites where new processes and operations have yet to become commonplace.

More recently a talk was given to three groups totalling about 300 employees on accident-proneness, wherein the behaviour characteristics of accident recidivists were discussed. The illumination into the concepts of mental health—based on a newer approach—was thoroughly productive of additional understanding of the aims of preventive psychiatry in industry. As the patrol force had found itself undergoing a great weight gain—and two of its members had had recent coronary infarctions —a group discussion was held on the subject " Guard — Your Weight ! " The emotional factors present in food addiction were discussed and the principles of reasonable dietotherapy were presented.

With the summer months, material on " vacation daze " was offered, and early in the athletic season a meeting was held on conditioning and preventive care of the 7 p.m. athlete—the after-hours member of the company-sponsored baseball or football team.

These verbal activities have represented a healing of the usual breaks in communication between management and labour. The worker is informed of his health status, is given information covering the medical aspects of his job assignment, and at all times and from different approaches is exposed to the daily applications of bettered interpersonal relations. Superimposed on these intra-plant meetings are the talks given in the community to various parent-teacher, church, and civic organisations, members of which are laboratory employees and their wives. With a double approach in the use of this single medium of health education, the job-home apprehensions are lifted in part and the ways to conflict-resolution demonstrated.

Summary

In summary, it is emphasised that in an unusual industrial setting one must employ unusual methods of extending health principles. In all occupations where knowledge of the process, the product, or the precautions is not within the ken of the average employee, a direct imparting of clarifying factual data, based on meeting human needs, motivations, and goals, is indicated. Through a close rapport with the employed personnel, the fear of the unknown can be lifted, and more effective, productive persons can result through the intermeshing of latent skills and the avid exercise of partially used abilities. The fuller utilisation of the spoken word by industry's physicians can improve the functioning of the group through replacement of fears by a new set of constructive attitudes.

SOVIET FAMILY LEGISLATION

By RUDOLPH A. J. SCHLESINGER, Dr.rer. pol., Ph. D., *Joint Editor* Soviet Studies, *Department for the Study of the Social and Economic Institutions of the U.S.S.R., University of Glasgow.*

THE record of the family legislation of any country provides no direct evidence for the student of health problems: questions of health, economics, general philosophy, etc. provide only part of the basis from which the legislator starts. Nor can the legislator, even in the most powerful state where every one of his moves is supported by a comprehensive system of public propaganda, make more than a very limited contribution to the formation of those actual units of social life with which the student of health problems is concerned. But considerations of physical and mental health form one of the most important motives of legislation, even in a country where considerations of economics and defence are proclaimed as the central ones; it is the citizen as an actual person who has to work and to defend his country, and this citizen has been formed in a certain family, or other educational, environment. Precisely because the socio-economic system of the U.S.S.R. is so greatly different from ours, and because considerations of social transformation have provided the avowed motive of original Soviet legislative policy, the modifications of this policy in the course of three decades may indicate to what extent traits and trends observable in our society are conditioned by its specific structure and background, and to what extent they are characteristic of a modern industrial society, whatever its socio-economic structure.

The Background

One caution must be made at the very start: the U.S.S.R.—and even its legislation—does not just represent an attempt at the application of socialist theories in a modern industrial society. The U.S.S.R. is not a country but a continent; at the time of the Bolshevik revolution Russia comprised an even greater variety of civilisations than it does at present, after a systematic process of industrialisation. Amongst the upper and middle classes of the major towns, and amongst the educated minority of the workers, the problems of the modern family were sensed in a way very similar to that current in western Europe; and for generations before 1917 the Russian intelligentsia had a marked tendency to get down to the practical problems.

The questions asked in such an environment differed from those put in the West mainly by greater consistency of approach to problems such as equality of opportunity and status of women, and freedom of decision in the most important issues of personal life, security of motherhood, etc. In no other European country (Britain with its dramatic suffragettes' movement not excluded) was such a determined stand made for the entrance of women to the professions (if necessary by emigration and the acquisition of degrees at foreign universities), and in no other country did the female part of the intelligentsia reward the socialist movement's sympathy with its aspirations by such unhesitating and self-sacrificing support as in Russia. With this record before his eyes, every participant in the movement which in 1917 conquered Russia was bound to regard the suggestion that women were unfit for many intellectual activities and responsibilities as a ridiculous attempt to defend oppressive forms of social organisation. (This issue should not be confused with the tendency of some Western feminists to assert women's suitability for *every* kind of work: this tendency was rejected even by the most radical trend of Soviet feminism.[1]) The radical, but clearly Western-dominated, approach to the problems of feminism was not confined to the active revolutionaries: Tolstoy's *Anna Karenina*—a book which, according to Krupskaya's testimony was literally read to pieces in Lenin's home—became an international classic precisely because it raised questions which were topical everywhere.

The conditions against which Anna Karenina and the Russian revolutionaries from an upper and middle class background protested in different ways did not fundamentally differ from those of the Victorian home in which, to quote Dr. Holt's article in the October 1951 issue of this journal, "anyone who had to get married was never allowed to forget it". Nor did the conditions amongst the—very few—skilled workers substantially differ from those predominant amongst their class-fellows in other continental countries; free unions of fair stability (without formal pretence, and without "the little man's divorce", as bigamy has occasionally been described in this country) were quite frequent.

But all these together covered only a small section of Russian reality. The millions of peasants' homes were man-dominated in the most brutal sense of the term, and women's condition deteriorated at least in the poor peasant's home when the economic differentiation in the village increased its dependence on the richer neighbour. Of the Islamic regions some—especially the Volga Tartars—were fairly advanced, but most of them

[1] Cf. Alexandra Kollontay's statements, translated in my *Changing Attitudes in Soviet Russia : The Family* (London, 1949), pp. 47-8.
All further quotations in this article refer to this collection of materials.

(especially Central Asia) belonged to the most backward provinces of the Islamic world. There were large areas over which a primitive tribal organisation was still in operation: as late as 1936, mountaineering in Svanetia (a part—true, a very isolated one—of the well-advanced Georgian republic), I found the Government's struggle against blood-feud just in its concluding stage. Large sections of the Penal Codes of the Republics concerned[2] deal with paying bride-price, abducting women, polygamy, marriage of minors and similar "offences originating from tribal custom", some of which (*e.g.* marriage of minors) come under heavy penal sanctions only if they were caused by local custom which the legislator wished to repress in the interest of the emancipation of women. So far as the external aspects of life were concerned, Soviet legislation was not extremist: as distinct from some neighbouring Islamic countries, any Soviet women could wear the yarmak if she so desired. It is true, those who killed women for having dropped the yarmak were theatened by extreme penal sanctions, for which a political reason had to be given in the absence of capital punishment for ordinary murder.[3]

On the whole, the Soviet state, confronted as it was with initiating a revolution in human relations against the prejudices of primitive custom, has firmly kept to the Marxist concept that undesirable phenomena in family life should, and can, be overcome by the removal of their economic causes. In 1935 Stalin hailed the Labour Day[4] as the great emancipator of peasant women because it granted them an income independent of that of their menfolk. All ideologies apart, the Soviet Government is constructing a modern industrial society: as we shall instantly see, after the first "house-cleaning" was concluded, its policies aim at stabilising family relationships in such a society. One further step was taken in 1926, by the legal recognition of *de facto* marriage and the introduction of automatic divorce, without court proceedings, even on the demand of one party only; these measures were repealed in 1944 when the interest in stable family relationships had become predominant.

The Policies

The critical point, of course, is how much was to be understood by "house cleaning". The first enactments of the revolutionary government did not exceed measures current in modern legislation elsewhere. They were revolutionary only in comparison with Tsarist Russian legislation, and consisted of such measures as the transfer of marriage and divorce

[2] Because of the presence of problems like the one discussed, the Penal Codes of the individual Republics are not uniform, though the general approach is identical.
[3] Loc. cit. pp. 198-9.
[4] The accounting unit according to which kolkhoz members are rewarded according to the quantity and quality of the work done in the collective economy.

from the Church to the Registrar's Office, admission of divorce on the joint petition of both parties, or by court decision on the petition of only one party, the decision being left to the judge's discretion.

Much confusion about the real social situation has been created, and is still being created, by exaggerated emphasis on some literary pronouncements, the most radical of which are likely to attract the greatest attention (especially abroad, and especially in the periodical spells of "cold war"). From the documentation easily available it is obvious that Alexandra Kollontay's concepts of "free love" were *always* those of an outsider, formulated in conscious opposition to the outlook predominant amongst the party leaders, rebuked by Lenin and never popular except amongst a narrow bohemian stratum; yet up to the present day we find them, in Western publications, occasionally described as "semi-official".[5] But even in statements by authors who must be regarded as characteristic of the Soviet outlook, concepts of an eventual withering away of the family played a predominant part. The withering process, however, always referred to the family as an economic unit of consumption and as the main place of education, and *not* as a normally permanent union of man and wife. To some extent this may have been due to the impact of the more Utopian elements of Marxist ideology,[6] to some extent to exaggerated estimates of the potentialities of some measures which are clearly necessary in order to enable women to take their share in production, such as crèches, pre-school education, public canteens, etc.[7]

The idea that these measures, and any development which draws women from the home into industrial and professional work, involve destruction of the family as an educational unit, is not peculiar to the early Soviet theorists. It was expressed, though with a different evaluation, in Dr. Holt's article. I wish to make one contribution to this argument. The one state which from the very start up to the present day has pursued a policy of drawing as large as possible a part of the female population into all kinds of employment, and which therefore does as much in the field of pre-school education etc. as its resources allow, has come round from an initial affirmation that this implied an eventual "withering away of the family" to the opposite point of view. In all Soviet publications since 1936 the family is described with great fervour as "the primary unit of our Soviet society". The Ministry of Education publishes a special monthly, *Family and School*, to promote collaboration between home and school and the activities of parents' committees. Great emphasis is laid upon the responsibilities not only of parents towards their children (this

[5] This was done even in one review of my above quoted book, in which Kollontay's statements are paired with those of no less authoritative a person than Lenin. (Loc. cit. pp. 72 and 76 ff.)

[6] Loc. cit. pp. 7 ff. and 13 ff.

[7] Ibid. pp. 79 and 169 ff.

was always done) but also of the younger members of the family towards the aged ones, etc., etc.

The reasons for this turn, as frequently stated, are political as well as economic. From the political point of view, it is obvious that already in 1936 the typical parents were people who grew up after the revolution. There was no more need to encourage a struggle of the young generation against the ideas of their elders; the typical Soviet home might be regarded as a suitable place to instil in the new generation that spirit of civic loyalty in which the state is interested. From the economic point of view, the efficiency of incentive payments, bonuses, etc. is greatly increased by the recipient's interest in care for his family. This explains not only the removal, since 1943, of the former restrictions on inheritance and the restriction of estate duties to a maximum amount of ten per cent., but also the replacement, in 1944, of men's obligations to pay alimony for children born outside wedlock by public payments to unmarried mothers.[8] The establishment of full employment, as well as its implications for the status of women in society, ranked high amongst the reasons brought forward to show that the original policy of unconditional protection of the woman's, and especially the unmarried mother's, interests in matters of abortion and alimony claims against the father had become superfluous.

It is difficult to state from the outside to what extent these claims are justified. Full employment is an obvious fact, but so are the gaps in the system of crèches and Kindergarten. The public payments to unmarried mothers, which range from 40 rubles a month for the first to 100 rubles for three and more children, can hardly be regarded as a contribution more substantial than our family allowances which are paid to all mothers, married or not. As an alternative to the subsidy, the unmarried mother may, without any cost to herself, place her children in public educational institutions; she may take them out whenever she wishes. This solution is not very satisfactory to the mother nor, it appears, to the state: our familiar argument about the relative merits of the public educational institution and the foster home is known in the U.S.S.R. as well. (Arguments on ground of principle against the former are naturally absent and its potentialities are more strongly emphasised.) It should be kept in mind that, in Soviet conditions, the argument concerns only children under twelve: the Labour Reserves, which supply a large part of skilled labour, are trained in public boarding schools and so are, as in other countries, the future commissioned officers.

[8] Both measures were enacted during the war emergency, which provided immediate reasons for them; but the first was finally enacted as late as 1945, and the second was embodied in a general revision of Soviet Family Law which could, besides, during the war be carried out without the usual discussion. Thus the war appears very much more to have promoted the execution of concepts already grown in the minds of the Soviet rulers than to have caused them.

Abortion was legalised in 1920 only with strong emphasis on its being an evil which had to be fought by propaganda,[9] and it was never popular with the Soviet medical profession. An enquiry in 1926, made by a Kiev woman doctor amongst 100 women seeking abortion, showed that nearly half of them mentioned difficult material conditions, 14 medical and eugenic indications (which would have justified abortion even under the 1936 legislation) 9 matrimonial crises, 8 professional handicaps and 16 fear of social ostracism.[10] To get rid of the two last-mentioned reasons for abortion may be within the scope of public policies. A remedy against difficulties for children from broken marriages has recently been sought by the practice of the Courts wherever possible to refuse divorces in cases where there are young children, As to the large proportion of women who sought abortion because of material difficulties, it would, today, clearly be possible to find suitable jobs for them in every major town, probably with crèche accommodation; but amongst material difficulties in the U.S.S.R. bad housing still towers over insufficiency of income. Bad housing was the main reason which caused a majority of the participants in the public discussion of 1936 to object to the prohibition of abortion.[11] This argument was not answered, and could not be answered, by the measures inserted in the decree to reduce the material burdens of motherhood. Improvements in the housing field would probably do more to raise the birth rate and to reduce the occurrence of family crises than do the allowances paid to mothers (whether married or unmarried) of large families, in spite of the fact that these allowances reach a very high amount at the birth of the seventh, and especially the tenth, child. The most that can be said in favour of these measures, including the granting of the title Heroine Mother to a woman who has given birth to and brought up ten children, is that they increase the prestige of motherhood in general, including that of the unmarried mother.

The Problems

After having passed its revolutionary period—which, *a posteriori*, is explained by the consideration that it was necessary in order to break up some millions of unfree relationships and to establish the principle of equality of the sexes—Soviet legislation, as enacted in the period 1936-45, has come to conclusions very similar to those current in other advanced industrial countries. Most of the differences may be explained by the absence of traditional prejudice: the Soviet state can leave the decision upon whether a divorce should be granted or not to the judge's commonsense, without binding him by enumerating grounds for divorce, the presence of which gives a claim to, and the absence of which excludes, the

[9] Loc. cit. pp. 44 and 172-4.
[10] Ibid. p. 184
[11] Ibid. pp. 256 ff.

granting of a divorce; it can also encourage marriage without paying tribute to the concept that being an unmarried mother is morally wrong. But in essence the conclusions arrived at are the same: marriage is the normal way to motherhood; the family home is the ordinary, though not the only, place to rear the new generation; men and women have equal rights within the family as well as in professional life. As regards the last point, the Soviet system is more consistent than ours: arguments about equal pay would be inconceivable in the U.S.S.R.

So far as the basic region of agreement extends, differences exist more in appearance than in essence. In the publications of a state which claims education as one of its main functions, in the interplay between school and family home the former is bound to get more emphasis than it receives in what is described as public opinion in a country with religious traditions of parental authority; it does not follow that the same would hold true in a comparison of the actual practice of the two countries. Nor need we conclude from the absence of Soviet publications about abortion (apart from an occasional doctor struck off the register and sent to prison) that it is less frequent than in Britain, with a very similar legislation. If a Soviet author of high standing lets the heroes of a novel go through a matrimonial crisis, and finds tragedy but no personal fault in the event, as did A. Koptyayeva in her novel *Ivan Ivanovich*, praise of the achievement will be qualified by rebuke for the failure to instil in readers the feeling of responsibility for the preservation of the marriage. (There was not even a child in the case.) A British author would not be exposed to similar criticism (except perhaps in a few Church papers), but it would clearly be a mistake to draw the conclusion that the informal type of public opinion—the one that matters—is more hostile to divorce in the U.S.S.R. than in Britain.

The real problems of the Soviet approach to the family arise less from the consummation of the permanent results of the feminist movement than from the potential contradiction between the recognition of the family home as one centre (though not the only one) in the education of the future citizen and the demand for the access of women not only in theory but also in practice to all professions for which they are physically fitted. Both these demands are backed by the very real interests of the Soviet state. The war could hardly have been won without the enormous contribution of women in the factories, in the fields and even in the army. But when co-education in urban schools was abolished, there was as much semi-official emphasis on the need to prepare the future housewife and mother as on the temporary need of pre-military training for the boys.[12] The argument has since reappeared from time to time[13]; and there is no

[12] Loc. cit. pp 363 ff. and 393-4.
[13] Reported in *Soviet Studies* vol. 2 (1950-51) pp. 180 ff. and 322 ff.

doubt that it is being continued outside the sphere of publication (or at least of those publications which are exported to this country).

It is evident that the real issues discussed are the fitness of women for all the professions, as distinct from specifically "female" ones (amongst which, in the U.S.S.R., not only teaching but also the medical profession is recognised) and the desirability of such relationships between the sexes as are likely to result from formal social contacts, as distinct from a sharing of all their interests during the period of maturing.[14] Even an argument which appears strange in the Soviet framework, that happy motherhood was promoted by separate education, was used, though rejected by nearly all the participants in the discussion (which, in general, showed a definite majority of supporters amongst the disputants, men as well as women, for the restoration of co-education[13]). Issues such as those discussed are the really controversial ones in social life, in the U.S.S.R. as well as elsewhere; it would be unrealistic to expect quick results in either direction.

In an earlier issue of this Journal the view was expressed that the strengthening of family life presupposes the undoing of recent social developments; the Soviet discussions are interesting precisely because they deal with the conditions of a stable family in a framework in which these developments have become unquestionable.

[14] The argument made by Dr. Torrie, in the January 1952 issue of the *Health Education Journal*, pp. 12-13, against boarding schools would hardly be applicable in the Soviet framework where boarding schools for youths during puberty are accepted only where this is conditioned by the professional training given (see above p. 64) or where there is simply no alternative, as for juvenile delinquents.

BIOGRAPHICAL NOTES

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FRANK TYRER, M.A., B.Sc.—Senior science master, Waterloo County Secondary School, Lancs. Has spent 24 years in learning biology, learning how to teach biology and experimenting in teaching biology. Lectures and writes on teaching biology, social studies, general science, visual aids. Is now preparing a series of four school biology textbooks, the first due to appear this Spring.

MILESTONES IN MEDICINE

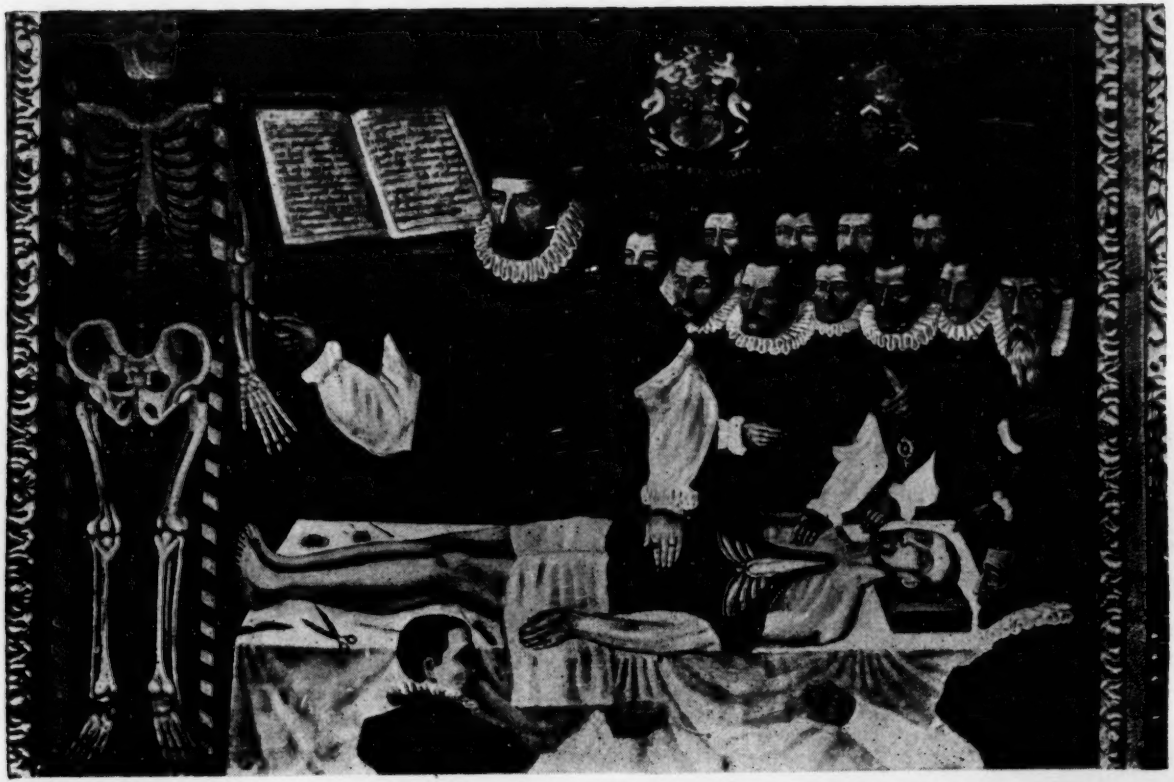
18. The Beginnings of English Surgery.

By E. ASHWORTH UNDERWOOD, M.A., BSc.., M.D., D.P.H., F.L.S., *Director. The Wellcome Historical Medical Museum; Hon. Lecturer, University of London.*

THE EVOLUTION of the surgeon followed in England a course somewhat similar to that which occurred in some other European countries. The surgeons proper were few in number during the fifteenth century, and still fewer had received the education which was considered proper to a physician. Much minor surgery was carried out by the barbers, who bled patients, opened abscesses, and performed similar operations. This division of labour worked fairly well. Both the surgeons and the barbers had their regular " shops "—or consulting rooms, as we should now say. The quality of their practice could therefore be controlled in a rude way by the reactions of their patients and the criticisms of their fellows. But there was a third class of persons practising surgery whose work could not be controlled at all. These were the itinerant practitioners who had had no training whatever, and who moved about from one place to another. These surgical pedlars specialised particularly in cutting for the stone and in " couching " for cataract.

An attempt to wipe out these irregular practitioners was made in 1462, when there was formed a loose union between the barbers and the surgeons. Some of the surgeons still held out, but their Fellowship was formally united with the Barbers Company by Act of Parliament in 1540. This event was a great landmark in British surgery. Holbein painted a famous picture of Henry VIII handing over the Charter. It is being received by the first Master of the United Company, Thomas Vicary, who may be regarded as the father of surgery in Britain.

Despite his great experience and his fame, Vicary remains to this day a rather shadowy figure. Perhaps it is because he left no self-revealing writings. Only one work bears his name. This is the curious anatomical work which is variously named—according to the edition—*The Englishman's Treasure* or *The Anatomie of the Bodie of Man*. Although Vicary's name appears on the title-page, it was shown many years ago that the work is simply a " modernised " version of a much earlier manuscript based



JOHN BANESTER giving the Visceral Lecture at the Barber-Surgeon's Hall in 1581
(After a picture in the Hunterian Library, Glasgow).

on the works of the great anatomists. What is certain is that Vicary became surgeon to Henry VIII in 1528, and that two years later he was Master of the Barbers Company. He was the first Master of the United Company, and before he died in 1561 he had been surgeon to four sovereigns of England.

Thomas Gale was serving as a military surgeon in the early years of the United Company, and he did not resume practice in London until two years before Vicary died. He assumed Vicary's mantle, and wrote important books on war wounds.

Vicary's death saw the rise of two young surgeons who by their writings added much to the credit of English surgery. John Banester sailed as a military surgeon with Warwick's expedition to Havre in 1563. After studying at Oxford and practising at Nottingham, he eventually came to London, where he became a leading surgeon. Banester wrote four works on surgery, and he lectured on anatomy to the Barber-Surgeons.

An even more colourful surgeon was his younger contemporary, William Clowes, who was born in 1544. He served his apprenticeship to a London surgeon, and, like Banester, was with the Havre Expedition. Clowes remained in the Navy for some years, and in 1569 he settled in London as a surgeon. He was soon appointed to the staff of St. Bartholomew's Hospital, and he later served on other naval expeditions, and also in the fleet which defeated the Armada. After the death of Ambroise Paré, Clowes was probably the foremost surgeon of his age. He wrote an important work on surgery, and also works on the French pox and on the King's Evil. All his works are written in English.

In these early days of British surgery, text-books were much more entertaining and revealing than they became a century later. The writings of Clowes are an excellent example. In his robust prose he tells us how the patient came to consult him, and what scurvy treatment he had had from his previous surgical advisers. Frequently the conversation between Clowes and his patient is reported verbatim. On irregular practitioners he is always severe; " blind bazzards," he calls them, and " runagates or vagabonds." He laments the fact that the art of medicine is being insulted, " and the true professors of the same are thus spurned at, trodden down, embased and defaced through the wicked behaviour and counterfeit glories of the aforenamed rude rabble of obscure and unperfect experimenters, and such other prating proud peasants and ignorant asses." If some modern text-books could be written in this style, they would be much longer, but much more amusing to read.

BIOLOGY WITH SENIORS IN A SECONDARY MODERN SCHOOL

PART I.

By FRANK TYRER, M.A., B.Sc.,
Senior Science Master, Waterloo County Secondary School, Lancs.

TO-DAY I have had the senior children, the fourth and fifth year forms, for biology. As I watched them engaged in looking up references or making posters, I realised what an important step in the education of children the raising of the school-leaving age proved to be.

Before the introduction of the extra year it was found possible only to give the children some knowledge of the essential facts and principles of biology, and to seize whatever opportunity there was to show how this knowledge was applied in everyday life. Now, one felt that it was possible to make greater use of the biological knowledge the children had gained in the first three years to show how biology is being used in the service of man. Now we could bring our biology into closer relationship with the life of the community and the daily activities of man. The theme of the work with the senior children was " Biology in the Service of Man," and could be summed up in the definition of social biology given by D. Caradog Jones, the sociologist:—

> " Social Biology is concerned with the contribution of biological knowledge to the solution of social problems and the promotion of human welfare."

Thus, having in the first three years given the children a good grounding in elementary biological facts and principles, we will now show them how pure scientific discoveries are used for the benefit of mankind, try to develop in them as far as possible a scientific attitude and a critical mind, and encourage them to do what they can to achieve a high standard of health in themselves and in the community in which they live.

With the basis of the work for the senior children decided, the problem was how to go about it. I have always believed that senior children should be encouraged to carry out some study and investigations themselves, either individually or in groups. I also felt that they should be given opportunity to discuss the problems and questions which arose during their investigations. It was along this line, then, that I hoped to work

when the extra year presented the opportunity.

With the raising of the leaving age, we now had three fourth year forms, 4A, B, and C, and in addition a fifth form for those who remained at school after attaining the age of 15 years. In the first year during which the leaving age was raised we had a small fifth form, but only one term was available for work with them. I discussed with this form the kind of work I had in mind, and between us we suggested a number of topics for study. Finally we chose " Improvements in Our Town." On several Saturday mornings the group met and paid visits to various districts, noting any evidence of over-crowding, insanitary and derelict buildings, ugly and ill-used spaces, etc. In the biology lessons in school there were discussions on what they had seen and what might be done about it, and suggestions were made on the improvements that could be carried out and the amenities that were required. While the work was in progress, an excellent exhibition on civics and local government was held in a near-by town, and the fifth form went. This visit proved of great value and interest, and helped them a great deal in their discussions.

The boys and girls were intensely enthusiastic and one felt that some good had been done in rousing their interest in civic matters. The experiment also indicated the possibilities of this type of work with seniors. But it showed that the one hour a week with frequent interruptions we had for this work was not enough. Little written work was done, and no report was made as we intended. It was clear that more time was required, that a flexible time-table was essential, and that a good library of reference books was absolutely necessary if this work was to be of any real value.

Correlated Studies

During the following summer holiday I gave much thought to the problem, and when considering what we might do I decided upon two topics for the seniors to study—" Food and Nutrition " and " Biology in the Home." As I planned how to deal with this work it soon became clear to me that both topics were very suitable for study, not only from the biological aspect, but from the point of view of domestic science, geography, history, physical science, etc. Here was a chance to make use of the tools of education in a combined effort. I contacted the history specialist during the holiday and discussed the idea with her. She was enthusiastic. I made out a provisional plan to show what it would be possible to do with the two projects—" Homes of the People," and " Food of the People," and on returning to school after the holiday I approached the teachers who I thought might be interested and who might be closely concerned. All expressed enthusiasm, so we decided to carry out the work with the fifth form.

The idea was explained to the children and both topics were set going. Throughout the time, the teachers concerned frequently met to discuss the work and report progress. Each teacher had complete freedom to carry out the work as he or she wished.

It was intended at first that each child should be given some special section of the topic to do, and that when he had completed his study and made his report or written his account, he should read it to the other members of the form and discuss it.

In order to carry out the work it was necessary to make " domestic arrangements " between the members of the staff concerned, so that, for example, when form 5 were down on the time-table to be taking biology with me, they were actually completing some other aspects of the work, e.g., the historical side, in my room. In this again, we see the need for some break from the routine time-table.

When a child had completed the work given to him and had written it out roughly, he and the specialist teacher concerned read it through together. The child then took it to the English specialist, with whom there was all the time the closest co-operation. The rough copy was then amended, written or typed out, and the necessary illustrations were drawn, photographed, or collected.

The work went on steadily and the children shewed great interest. We found that having to stick to the set periods of the time-table often meant that just as the children had found some information they had been searching for, the bell for changing lessons went, before they could make use of it, and so the next time they came they had to waste time in getting their material together again. The biggest nuisance was the break in the work due to children leaving at the end of one or two terms. It was foolish, too, to deal with two topics simultaneously. It was decided to do so because in the beginning the boys wanted to work on the topic " Food of the People," and the girls on " Homes of the People." One topic would have been much more satisfactory.

With the opening of the next school year, a further difficulty arose. Form 5 was combined with a large Form 4A, and this put an end to most of the correlated study of a topic by the various subject groups. Some combined studies were, however, carried out with Form 5 and with Form 4A, but on a limited scale. For example, two topics, " Disposal of Sewage and Refuse " and " Sanitation in the Home " were studied from the historical and biological aspects. On another occasion, while the seniors were doing some work in their history lessons on " Lighting through the Ages," in their biology lessons they were making a study of " Lighting and the Eyes." In the case of domestic science and biology the work was also continued to some extent, particularly with the topic " Food of the People."

Other Group Studies

Besides these correlated studies, other group studies have since been carried out by the pupils of the fourth and fifth year forms in their biology lessons. These have included the following:—

Homes of the People:
- Sanitation;
- Dampness;
- Ventilation;
- Pests.

Disposal of Sewage and Refuse. Sewage Purification.
Smoke and Smoke Abatement.
Lighting and the Eyes.
Good Health.
Clean Food.
The Public Health Services of Our Town.
Production of a Film Strip—"The Public Health Services of Our Town."

In all cases the work has taken the form of posters, and usually a written account in booklet form has been made. In addition, the boys and girls have given lecturettes on the work they have been doing. On one occasion, in the case of the study of "The Public Health Services of Our Town," the senior class made a film-strip.

Visits and Talks

In connection with these studies and also as part of the ordinary work, a number of visits have been paid to places of biological interest such as a local nursery school, the local clinics, the Borough Health Department, the refuse tip, the Liverpool City Laboratories, a Biological Institute for the production of sera and vaccines, Civic and Local Government Exhibitions.

A number of people concerned with individual and public health were invited to the school to talk to the seniors about their work in the maintenance of the health of the community. Amongst the visiting speakers have been: the Chairman of the Health Committee, the Medical Officer of Health, the Chief Sanitary Inspector, the Senior Health Visitor and Nurse, a representative from the Borough Engineer's Department, the Matron of a Hospital, the Director of a Biological Institute.

Continuing Earlier Studies

It must not be inferred that all the time was devoted to the type of study I have been describing. Some time of every school year was devoted to continuing the studies of biological facts and principles begun in the earlier years of the course in biology. A choice has been made from the

following list:

Heredity or Environment, Which?
Evolution: From Amoeba to Man.
The How and Why of Evolution.
Biological Control of Pests.
Bacteria and their Work.
The Fight against Disease.
Health and the Community.
Fighting Plant and Animal Diseases.
Biology and Industry.
More about Food.
Biology and Agriculture.
Biology and the Home.

The work on bacteria is practically essential, since bacterial activity enters into almost all aspects of human activities. Furthermore, it provides the foundation to some extent for the lessons and work on " The Fight against Disease," " Health and the Community," " Fighting Plant and Animal Diseases," etc. Again, the study of bacteria provides excellent material in the history of scientific achievement, a side of science which, alas! we sadly neglect in our teaching. It is a source of much experimental work which can easily be done without special apparatus, and children delight in making cultures of bacteria from rooms, milk, their fingers, flies, and from soil. It is interesting to note a child's astonished reaction to a Petri dish culture of bacteria from a boy's dirty hands, and another culture after the boy had washed his hands thoroughly!

It will be possible also during the fourth and fifth years to enlarge upon the biological processes studied in the earlier years of the course in a simple manner. For example, food and digestion will have been discussed in a very elementary manner in the second or third year. It will now be possible in the fourth year to go somewhat more deeply into a study of nutrition.

And when considering this expansion of the work of the earlier years we should not limit the study to a narrow field, as we might easily do. For example, in the study of nutrition, we must go beyond a study of nutrition as it affects ourselves and our immediate community, and consider the food situation as it affects large groups of people, and the steps being taken to improve nutrition standards of throughout the world.

The First Three Years

It should be obvious that the work that can be done in the fourth and fifth years will depend a great deal upon the type of biology taken in the first three years of the course. A course of biology which is nothing more than a study of botany and zoology in which a great deal of time is taken

up with the study of the structure and parts, say, of a plant, and in classifying plants and animals will be more or less useless. A wider view of biology will be necessary in which man himself will be the main object of study. But we must be careful not to err on the other side. We must see that the course does not develop into a course in human physiology. We must consider man in relation to his environment and in his relationships and contacts with other living things, and therefore we must make a study also of plants and animals.

From long experience in teaching and experimenting in teaching biology I have found the following course, briefly outlined, to be the most suitable.

In the first year the work is largely nature study to link up with the nature study taken in the primary schools, and to prepare the ground for the biology to be taught in the following years. In addition, simple matters of hygiene and good health will be included.

In the second year the life processes in man are studied, and in each case a comparative study of the same process is made in one or two common or well-known animals. The study of plants will centre upon the basic facts of plant nutrition and lead up to the importance of food-making in the green plant.

All the time, care is taken to see that the lessons do not become just a series of separate topics, but each process is studied in its relation to other processes, so that the children realise that the body functions as a whole, and not as a collection of unrelated systems.

In the third year the work is concerned with those processes which contribute mainly to keeping life going—the nervous sytem and the responses of living things to various stimuli, and reproduction and growth in living things, still taking man as the chief type of living thing.

In this second and third year work health education is not given as a number of separate studies, but arises naturally from the biology. For example, talks and experiments on the frame-work of living things, will include discussion and experiments on bone, and this naturally will introduce the class to the importance of correct feeding for building up bone and a good frame work. Lessons on the transport or blood system will obviously include instruction in the treatment of simple cuts. When talking about the air we breathe in respiration, opportunities will arise to talk about smoke and smoke abatement, and the incidence of harmful dusts and fumes in certain industrial processes and the steps taken to protect workers.

With this course behind them the boys and girls entering the fourth year should have a fairly good knowledge of the basic facts and principles of biology, and be ready to go ahead with their study of Biology in the Service of Man.

A CHAPTER OF ACCIDENTS

Part 2. Home Accidents.

By ERIC C. DOWNER, M.A., D.P.H.,
Medical Officer of Health, County Borough of Middlesbrough.

Table I shows 2835 accidents which occurred in homes between March 1949 and June 1951, and they are arranged according to age groups. I will comment briefly on this age grouping later. But, broadly, it may be seen that accidents in 1951 show a marked increase over the average for 1949 or even for 1950. What can be the cause of this ?

It will also be noticed that this vast number of home accidents have not produced many fatalities—only 43 out of 2835; and that of these fatalities no less than 33, or three-quarters, are in persons over the age of 60. So that home accidents in people under the age of 60, while causing pain, loss of work, etc., are not a great source of mortality.

The age least prone to home accidents is that between 15 and 40, the time of life when the senses are at their best and judgment is good. Accidents are, as one might expect, frequent in the under five's and fairly common among school-children. Between 40 and 60 they increase, but are not common, while over 60, and particularly over 75, they become common and in increasing proportion fatal.

Tables 3A to 3E analyse the causes of 2,888 accidents occurring in the home, and show that the causes of accidents and the seriousness of their effects vary considerably with the different age groups.

Children aged 0-5

941 accidents analysed.
4 deaths.
Fatality rate 0-5—0·42%.
Fatality rate in first year of life .. 6·66% (Table 3A).

The child under one year old, protected in his pram or cradle, is fairly immune from accidents as compared with his elder brother who is more mobile and more exposed. Fatalities have occurred, however, from cases of the inhalation of regurgitated food, from overlaying and from smothering, and in each of the three cases the child was premature and puny. One can see the constant watchfulness that is necessary over the new-born child, especially if premature, the necessity of a cot of its own and of the

Table 1

Middlesbrough (Mar. 1949-Jan. 1951) Home Accidents in Age Groups

Age Group	1949 Mar	Apl	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1950 Jan	Feb	Mar	Apl	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1951 Jan	Feb	Mar	Apl	May	Jun	Deaths 1949–51
I 0–5 (969)	45	36	29	23	30	18	17	36 *	21	18	44	45 *	29	47 *	36	21	87	51	23	47 *	46	31	35	34	35	42	45	48	4
II 5–15 (455)	14	18	8	7	10	16	6	18	11	9	20	15 *	13	23	15	15	15	18	10	17	19	16	23	17	17 *	26	19	30	2
III 15–25 (244)	7	6	6	5	4	0	4	8	4	4	12	7	11	10	7	7	12	11	4	13	11	13	23	15	6	10	12	12	0
IV 25–40 (417)	8	9	8	3	10	4	5	10	12	9	23	11	22	19	11	10	13	13	12	20	21	16	28	17	19	25	26	33	0
V 40–60 (423)	16	6	7	5	9	5	3	11	5	8	20 *	12	24 *	17	14	11	11	25	13	20	18	29	21	15 *	13 *	26	29	30	4
VI 60–75 (224)	3	7 *	2	6	5 *	7	3	5 *	2	8 *	9	5	12 *	12 **	7	8 *	6	10	7	10 **	13	13	9	5	6	14	14	16	10
VII 75+(103)	1	2	1	2 *	3	0	4 *	2 **	4 **	1 *	2 *	5 ****	8 **	5	7	2	3	5 *	9 *	3	7	7 **	3	2 *	2 *	6 *	6 **	1	23
TOTAL (2835)	94	84	61	51	71	50	42	90	59	57	130	100	119	133	97	74	97	133	78	130	135	125	142	105	98	149	151	170	43
DEATHS ..	0	1	0	1	1	0	1	4	2	2	2	6	4	3	0	1	0	1	1	3	0	2	0	2	3	1	2	0	

* = Death

Table 2 Home Accidents to Children Under 5

Age	1949 Mar	Apl	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1950 Jan	Feb	Mar	Apl	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1951 Jan	Feb	Mar	Apl	May	Jun	Total
0—1 ..	3	2	1	2	2	4	0	1*	0	4	5	5*	0	4	0	0	1	1	2	1*	1	2	3	1	3	3	3	4	58
1—2 ..	14	15	13	11	8	4	6	11	3	3	8	9	14	13	9	4	12	15	9	17	10	15	9	12	12	15	13	16	300
2—3 ..	15	10	11	10	14	4	10	11	11	7	15	19	9	16	17	7	13	18	6	12	16	6	12	12	7	16	14	14	332
3—5 ..	13	9	4	0	6	6	1	13	7	4	16	12	6	14*	10	10	11	17	6	17	19	8	11	9	13	8	15	14	279
TOTAL ..	45	36	29	23	30	18	17	36	21	18	44	45	29	47	36	21	37	51	23	47	46	31	35	34	35	42	45	48	969

Table 3 (A)

Causes of Accidents in Ages 0-5 (941 Accidents Analysed)

Age	Burns, Scalds, Etc.					Cuts, Bruises, Fractures, Etc.						Swallowing			Grand Total
	Spilling etc. hot liquids	Domestic fires	Other domestic equipment	Other Causes	Total	Falls from cot or pram	Other falls	Knives, sharp edges trapped fingers	Other Causes	Fractures	Total	Solid Articles	Liquids	Total	
0–1	9	6	4	2	21	5	8	2	6	0	21	2	1	3	45
1–2	68	39	20	4	131	12	92	32	18	5	159	2	8	10	300
2–3	44	27	15	4	90	2	134	37	23	18	214	4	16	20	324
3–5	40	28	5	3	76	3	101	34	28	18	184	7	5	12	272
TOTAL	161	100	44	13	318	22	335	105	75	41	578	15	30	45	941

avoidance of such soft pillows and bed-clothes as may cause a weakly child to smother if it turns over on its face.

The child of over 1 year is frequently scalded with hot fluid, and his older brethren from 2 to 3 and 3 to 5 are also, in diminishing progression. The same is true with injury from contact with fire or burns from contact with other domestic equipment, e.g. electric irons, pokers, hot dishes. This is the child who reaches curiously towards every projecting thing—a teapot spout, a saucepan handle. It is part of the desire to grasp the projecting thing and partly curiosity. Later, when he tries to stand or to walk, you get the child who pulls on the table-cloth for support and projects the contents of the table on to himself. Falls from cots or prams occur chiefly between 1 and 2, the top-heavy kind of baby insecurely strapped or fastened in. Other types of falls are more frequent between 2 and 5 as the child becomes more adventurous.

The child between 1 and 2 who falls seldom fractures himself. He does not fall far and his bones are soft. The child from 2 to 5 fractures more often. He falls from higher things, such as chairs, stairs, etc., and his bones are less pliant.

Between the ages of 1 and 3 children tend to swallow unknown harmful substances and liquids, chiefly pills, e.g. Kwell, pheno-barbitone, aspirins, etc., belonging to the parent, or liquids used in the house. Possibly he mistakes the pills for sweets, but the element of curiosity is also present. This habit continues into the next age group, 5-10.

Average for the quinquennium (0-5) is 941.

School children 5-15

426 Accidents analysed.
2 deaths.
Fatality rate 5-15 .. 0·47% (Table 3B).

The major accidents occurring in this group probably do not occur at home, but either at school or while at play, far from the supervision of their parents.

In this age group, traffic accidents also occur frequently.

Scalds and Burns: Still very frequent but, especially in the over tens, the lack of consciousness of danger is not a factor. The child is usually trying to either make toffee, or brew tea, or otherwise use the source of hot water or liquid. Over ten, these accidents occur more often in the female, the little mother. Under ten, falls and careless stepping have a bearing.

Falls: Very frequent but not now due to lack of balance and of muscular control. The child is now rushing eagerly and pehaps not looking where he is going in his eagerness. A lot of accidents at this age are caused by " bumping into things which hurt." Falls down the stairs

Table 3 (B)

Causes of Accidents in Children of School Age 5–15

Age	Burns, Scalds, Etc.					Cuts, Bruises, Fractures, Etc.					Swallowing			Grand Total
	Spilling etc., hot liquids	Domestic fires	Other domestic equipment	Other Causes	Total	Falls	Knives, sharp edges, trapped fingers	Other Causes	Fractures	Total	Solid Articles	Liquids	Total	
5–10	16	19	1	6	42	78	58	41	6	183	9	3	12	237
10–15	29	9	1	4	43	66	44	24	12	146	0	0	0	189
TOTAL	45	29	2	10	85	144	102	65	18	329	9	3	12	426

2 Fatalities

Table 3 (C)

Causes of Accidents in Age Group 15–25

Age	Burns, Scalds, Etc.					Cuts, Bruises, Fractures, Etc.					Swallowing			Grand Total
	Spilling etc., hot liquids	Domestic fires	Other domestic equipment	Other Causes	Total	Falls	Knives, sharp edges, trapped fingers	Other Causes	Fractures	Total	Solid Articles	Liquids	Total	
15–25	23	7	3	4	37	42	107	35	4	188	—	—	—	225

No Fatalities

are a common cause—trying to rush down them several steps at a time.

Fractures: On the whole infrequent, and chiefly in older boys.

Cuts, trapped fingers, etc.: Cuts now occur in the attempt to cut bread, meat, etc., not from ignorance of the sharpness of a knife, etc. Injuries with tools and gardening implements now appear. The lad is trying to do jobs. Haste, rather than ignorance, is a factor. Pushing hands through windows occurs.

Swallowing: Between five and ten, some solid articles are swallowed. Around the age of five, curiosity and mistakes are a factor, e.g. the child swallows to find out what he has got. Later, he swallows toys, marbles, etc., which he is storing in his mouth. A girl swallowed a button while holding it in her mouth to enable her to thread a needle to sew it on. Liquids are now seldom swallowed,—the child knows the difference between " pop " and paraffin, tea and vinegar. After ten, swallowing tends to disappear.

Fireworks: At this age, injury from fireworks manifests itself, more above ten than below.

The whole picture is that of adventurous youth which has not quite mastered the instruments and materials with which he deals, e.g. in statu pupillari.

Average in the two quinquennia is 237 and 189

Young People (15-25)

225 Accidents analysed.
No deaths. (Table 3C).

Females provide a majority of this group as far as accidents in the home are concerned. Again, the more serious accidents occurring to those in this age group probably do not happen at home. Road traffic accidents (this is the age for speeding) and accidents at athletic pursuits are a factor.

Cuts: At home cutting by a sharp edge, is by far the most frequent accident. It is caused by some simple domestic mishap, e.g. a tin opener or knife slipping, a bottle or window cord breaking, etc. Falls still are a factor and are more often due to slipping on, say a polished floor or step or from a ladder while painting, or reaching to a shelf. Gardening tools are an occasional cause.

Scalds are still associated with cooking procedures or brewing tea or frying.

Swallowing by accident poison or harmful substances is not found in this age group. Judgment would seem to be at its maximum, and a high proportion of the accidents which occur are much less preventable. The incidence of accidents in general and of fractures in particular, is lowest in this age group.

Average per quinquennium is 112·5

The Middle Years (25-40 and 40-60)

901 accidents analysed.
4 deaths.
Fatality Rate 0·44% (Table 3D).

Burns and scalds, almost always in connection with cooking, occur with the same frequency as in the previous group, but in view of the large number of people in this group, neither they nor injury by fire is a major cause.

Falls predominate as a cause and nearly one-third of these result in fractures. Almost half the falls are from a ladder, steps, or from a chair or table used to reach inaccessible places, and it is these falls which give rise to the fractures.

Wounds by knives or other sharp edges are common, and cutting bread, opening tins, and window glass, are the main causes. A few result from the use of carpentering or gardening tools. Falls increase towards the fifties, and slipping as distinct from falling becomes more common. Dropping things and bumping into walls or furniture are a cause. Is this connected with bad lighting? If so, what is the influence of light cuts?

On the whole, in this group the incidence of fracture tends to increase with age.

Splinters of wood met with while scrubbing are very frequent.

Dog bites are a very infrequent cause.

Swallowing harmful substances is almost unknown in this group.

Altogether, judgment is still good in this group, and prudence probably greater than in the previous. The average number of accidents in this group is 129 per quinquennium.

Old Age

Age 60—75:-

278 accidents analysed.
10 deaths.
Fatality rate 3·6%. (Table 3E).

Here, in equating averages per quinquennium, one must bear in mind that even today there are fewer people between 60 and 75 than in the previous groups. The average per quinquennium from 60 to 75 is 93 only.

Scalds are not a great cause nor yet fires.

Falls are the biggest cause, and as well as from ladders, chairs, etc., you now get falls downstairs and, in those over 70, out of bed. Slipping is more common, chiefly on polished floors and doorsteps. Falls over dogs and cats also occur. A higher proportion of falls result in fractures, Colles', femoral neck, humerus or radius, being the most common. Eight deaths in 258 accidents result from falls, one from fire. Falling in a fit or a faint occurs.

Table 3 (D)

Causes of Accidents in Middle Years (Age Groups 25–40 and 40–60)

Age	*Burns, Scalds, Etc.*					*Cuts, Bruises, Fractures, Etc.*					*Other causes of injury*	*Grand Total*
	Hot Liquids	*Domestic fires*	*Other domestic equipment*	*Other Causes*	*Total*	*Falls*	*Knives, sharp edges, trapped fingers*	*Other Causes*	*Fractures*	*Total*		
25–60	84	20	16	11	131	311	246	107	96	760	2	893

4 fatalities.

Table 3 (E)

Causes of Accident in Old Age (Age group 60–75 and 75+)

Age	*Burns, Scalds, Etc.*					*Cuts, Bruises, Fractures, Etc.*					*Other causes of injury*	*Grand Total*
	Hot Liquids	*Domestic fires*	*Other domestic equipment*	*Other Causes*	*Total*	*Falls*	*Knives, sharp edges, trapped fingers*	*Other Causes*	*Fractures*	*Total*		
60–75	7	4	3	2	16	165	21	7	68	261	1	278
75+	3	4	0	0	7	67	4	3	41	115	3	125
TOTAL	10	8	3	2	23	232	25	10	109	376	4	403

32 fatalities.

Wounds from knives or other sharp edges are less common than one might expect. There was one case of the *accidental swallowing of disinfectant*. What is the influence on falls and accidental swallowingof (1) bad lighting and (2) defective eye-sight ?

Age over 75:—

125 accidents analysed.

22 deaths.

Fatality rate 17·6%.

The same picture is accentuated.

Burns and scalds: Four cases of damage by fire occurred, with fifty per cent fatality. There was one fatality from scalds, out of three cases.

Falls predominate and two-thirds of them cause fracture, with over twenty-five per cent. fatality. *Fracture of the neck of the femur* is the most common. There were three cases of accidental inhalation of gas, due possibly to falling either into the oven, or in such a way as to turn on the gas tap. All these cases were fatal.

Falling in an attack is more frequent.

Knife wounds, etc., are surprisingly light in this group.

(to be concluded)

Table 3 (F)

Ages and Causes of Death in Fatal Home Accidents

Age	*Cause*	*Number*
A few days	Inhalation of vomit or milk from feed ..	3
3	Fell into unguarded fire	1
5	Nightdress ignited by unguarded fire ..	1
10	Tetanus following abrasion	1
47	Septic cut, occasioned by opening tin	1
58	Open fire (almost blind)	1
62	Slipped, stunned, drowned in bath ..	1
72	Set fire to bedclothes (? smoking) ..	1
74, 75, 78, 79, 80, 86, 86, 89	Fall, fractured femur	8
75, 75	Falls, burns from fire	2
48, 54, 58, 62, 64, 68, 68, 70, 70, 75, 75, 75, 76, 76, 87, 82, 84	Falls, chiefly from stairs (one blind) ..	17
86 and 83	Gas fumes. No ventilation	2
78 and 80	Gas fumes. (A) Broken tube (B) Fell in attack ..	2
80	Scalds from coffee	1
		42

Total accidents in survey: 2888

Table 6

Classified Causes of Home Accidents, Sept. 1950—June 1951

	1950				1951					
	Sept.	*Oct.*	*Nov.*	*Dec.*	*Jan.*	*Feb.*	*Mar.*	*Apr.*	*May*	*June*
Accidental burns by falling into fire	3	6	4	13	8	10	3	6	8	1
„ „ other means	7	7	14	7	5	5	1	3	5	8
„ „ clothing on fire	0	0	4	2	1	1	1	6	0	3
Scalds	5	11	14	17	13	10	13	29	15	16
Mechanical suffocation by food	0	0	1	0	0	0	4	0	0	0
Injury by cutting with sharp instrument	16	29	27	35	41	20	15	27	24	35
Injury by fall from bed	3	6	1	1	4	1	0	1	2	8
„ „ fall from stairs or steps	7	28	26	18	14	14	16	24	37	38
„ „ fall or crushing indoors	25	29	25	24	35	32	35	37	45	44
„ „ „ „ „ outdoors or windows ..	4	3	0	5	6	3	6	7	5	12
Accidents caused by blow	4	6	4	4	11	7	1	8	9	3
„ „ „ explosion	1	0	0	0	1	0	2	1	0	0
„ „ „ electric currents	1	3	2	0	1	0	0	0	0	0
„ „ „ swallowing harmful substances..	2	1	3	1	0	2	1	0	1	2
Other Causes	0	0	0	0	1	0	0	0	0	0
TOTAL	78	129	135	127	141	105	98	149	151	170

PITFALLS IN EDUCATION

By J. WHEELER, M.A., *Inspector of Child Care, London County Council.*

WHEN I WAS young someone once gave me an Easter egg. It was a curious egg, made of beautifully polished wood, in two halves which screwed together in the middle. When the outer shell was unscrewed, there was another inside, and another, and another—right down to the last tiny undivided shining egg.

I have often thought of that egg in the years that followed, years spent trying to get at the kernel of truth of human behaviour. Because we are by nature social, as well as human, beings, any study of why we behave as we do must mean a study of people reacting to, and on, one another. It is one of the youngest sciences, this science of Human Relations, but it began thousands of years ago, because how we get on with other people is, and always has been, of prime importance to each one of us.

Slowly accumulating knowledge helps us from time to time to unscrew yet another shell and get a little nearer the kernel of truth. For a long time we accepted quite happily (and still do to a large extent) the principle underlying the phrase " The battle of Waterloo was won on the playing fields of Eton." But are we justified today in laying such a burden of responsibility on the school years—on what happens to us then in work and in play, on the teachers who guide us and set the standards of our behaviour in these pliant green years ? It is important to each one of us to answer that question, because we all have our " Waterloos," our encounters with other people, our arguments and quarrels—and above all, in our case, our interviews, when we, as educators, try to influence others to alter some aspect of their behaviour.

Is it because " the playing fields of Eton " are not what they were " in our day " that we find so many people " difficult "—difficult to teach, difficult to persuade, difficult to get on with generally ? Or is it something else ? It is important to know because, apart from our effectiveness as educators much of our own happiness, most of our sense of well-being comes from how we feel we fare when at bay among those most dangerous of creatures, our fellow human beings !

Human Relations

Life is largely a matter of human relations, and human relations are circumstances in which one person is watchful, fearful, hopeful, understanding, critical or envious of another, loving or hating, admiring or condemning the other.

What causes our attitudes to other people, in all their apparent variety, in all their consistency ?

It is a commonplace that the human baby is the most helpless and dependent creature born. It is equally common knowledge that, without the physical ministrations of one mature member of the species, he would quickly die. What is far less widely known and accepted is that this dependence is much more than physical. The successful diplomat, the good interviewer, the happy and courageous person is trained long before the playing fields of Eton mean a thing. Make no mistake, *these* Waterloos are won (or lost) around a mother's skirts somewhere before we proudly record our fifth birthday. There, and then, we learn that the world (that is, the people who live in it) is friendly, trustworthy, helpful—or frightening, hostile or unpredictable.

Life a Riddle

Life is a riddle for us all. Happy are they who, out of confidence acquired in early affectional security, are ready and willing to " have a go." Miserable and awkward, perverse and contrary, are those who found life hard to cope with in those early days. These are the rigid, the intolerant, the unyielding ones among us. They are not strong enough to be gentle nor well-founded enough to be resilient. Modern knowledge has unscrewed another shell, and brought us a little nearer to the kernel of truth. Our realisation of the importance of these early experiences is the next step towards understanding why we behave as we do.

Life is such a riddle and the experiences we meet so utterly varied, that every act is indeed a leap in the dark. Small wonder, then, that most of us are just a little wary of the strange, bewildering creatures around us. So important is it that we should stand well among the people that matter to us, that we run no risks if we can help it. Hedgehogwise we grow our prickles and when we are most unsure those prickles are the sharpest. The more this happens, the more unhappy and ill-at-ease we grow, for naturally other people avoid our prickles and we are starved of the human contact which is the very essence of life itself.

Influencing Others

If then, we would influence others, if it is our task to get on with them, if it is our duty to amend their ways, there are things we should be well advised to note and learn. The first of these is just how like ourselves all others are, and how like them we are ourselves. If in our attempts to deal

with people they appear to us beyond hope, unteachable, too rigid or, in psychological terms, too resistant for words, can nothing be done about it ? Are they condemned beyond reprieve, doomed to be like that because the die was cast in their early days ? Must we despair of making progress and write them off ? Not, I believe, unless we ourselves have an extra allowance of the self-same prickles.

But perhaps we bristle with enthusiasm instead of prickles ? Sometimes when we go about improving others our methods are so reminiscent of the bull in the china shop that our friends long for the kind of person who " turned no unturned stone and left every avenue to explore itself." Enthusiasm for our cause is no excuse for brow-beating, and indeed, if not used wisely, is apt to rouse an equal enthusiasm in opposition. When you are most convinced you are right, when you are most inclined to think " thrice blest is he who hath his quarrel just," beware !

At such times tread softly and above all make very sure you leave your sledgehammer at home, locked up. Surely it is reasonable enough, if we insist upon brandishing a heavy cudgel, to expect the other party to take care to keep well out of reach. Yet, how often we marvel that the quarry we seek persists in keeping right out of the way. " Our argument is so lucid," we say to ourselves, " so perfectly obvious, that any fool could see it. The trial of it all is that we are so unfortunate as to have such benighted fools, such utter dunderheads, to deal with." Little do we realise with what unerring perspicacity these " blind fools " have spotted just what's coming. It is when we feel so justly right that we grow so very subtly condemning. A hammer is an unhandy tool with which to urge one's watch to tick. And we seldom realise how heavy a weapon is the pointing finger of disapproval or adverse criticism. Quite apart from the fact that " poor fish make poor friends," most people are, deep down, really very dissatisfied with their own efforts and are unlikely to improve on them if their own worst fears are confirmed by powerful, loud-spoken authority that leaves no doubt about the miserable effort they have made.

Oftentimes we show more sense in training pups than in our efforts to influence our fellows. Most of us realise that if we call Bonzo to us and then lift him with our boot he is less likely to answer the call next time. Rather do we present him with a tasty bite—a tit-bit he likes, knowing he will come for more. Why should we do less justice to the people we try to influence that we do to Bonzo ? In other words, if we really want to make our influence felt and lasting, we are more likely to succeed if the people we want to reach are not frightened away from the start. A little encouragement goes a long way. Even the mere absence of criticism can be a powerful aid—all the more powerful because it is so seldom used. Better that they should travel slowly with you than fly before you. The direct frontal attack invites opposition, conscious and unconscious. We

know ourselves that when our position is clearly and obviously going to be assailed, immediately all the defences are up and every weapon in our armoury of prejudice is mobilised. Logic and reason are of little use at such times. Yet, if only a little co-operation can be gained, just a little feeling of community of purpose, the door begins to open. People need help, but paradoxically enough, they are most open to helpful approaches when they themselves seem (at least to themselves) to be helping.

Comfort or Logic

We all hang on grimly to concepts we have already found comfortable and comforting. Other people call them our prejudices. They are born of our urgent need to feel at one with other humans who are important to us. They are the badges, the signs and symbols of our belongingness to the groups of these (to us) important people. It matters not a jot whether these are rational, as often as not they are anything but. Nevertheless, to hasten our feeling of belongingness we quietly absorb, often without a word spoken, the attitudes, assumptions, beliefs, habits, customs of these groups of people, who may be members of our family, neighbourhood, club, school or social set. Any idea, concept, habit, or way of life which runs contrary to these, endangers them and is therefore suspect, dangerous and shunned, or openly attacked with a force of energy and feeling directly proportionate to the degree of comfort yielded by the concepts threatened. The new ways will supplant the old, only if the person concerned *feels* that they yield a greater degree of comfort than those they supplant.

The health visitor going to a particularly unhygienic and unsavoury home finds other people there belonging, as it were, to the " select unsavoury non-hygienic club " If she wishes those people or any of them to join her " cleaner club," she must be able to make them feel for themselves the outweighing advantages of membership in the newer club. If they are still surrounded by important and valued members of the old, and if the advantages of the new association are not easily felt, the health visitor's campaign for new members is doomed to failure. Comfortable ways are those that help us to belong where we most want to belong. Against these, logical argument is the weakest weapon in our armoury. People will not begin to listen to us until they feel that what we have to offer looks like solving one or more of the acute problems life is posing them just then.

Collectors of proselytes, otherwise known as reformers, need to be wise as serpents and harmless as doves. The wisdom demanded is the kind that enables us to realise just what are the things dearest to the hearts of those we want to win. In other words *insight* into the things that give them the comfortable feeling they must have at all costs. Such insight, such real understanding of what life really means to them, what problems

really confront them, is not enough alone. We need too, to be able to *convince them that we understand*—not in a condescending way, but that we *feel with* them about it all. Having got that far, if only we can present the new way as one which can be spontaneously taken up because there is a familiar, comforting feel about it, the battle is won—because there has been no battle. There is a sense in which the most effective part of a really good lecture is the part unsaid, the part in which the hearer thinks for himself the thoughts the speaker wants him to think.

Though adults are more set and rigid and less spontaneous than children the problem of influencing people is not unlike that of training children. The most effective way of training children really well is to make it easy to do the right thing, instead of going out of our way, as we so often appear to do, to make it shockingly difficult to avoid doing the wrong.

HEALTH EDUCATION FOR MENTAL HEALTH

The subject of Mental Health is more and more occupying the attention of all the social workers in this and other countries. The necessity for preventive action in mental health work, which has been recently highlighted by Dr. John Bowlby's report *Maternal Care and Mental Health*, published by the World Health Organisation, suggests that the Public Health Services have an important part to play in the promotion of mental health and that they can do it by means of Health Education.

The Central Council for Health Education has therefore arranged a residential weekend Seminar for Medical Officers of Health and other interested people, to consider the possibilities of HEALTH EDUCATION FOR MENTAL HEALTH. It will be held at Southlands College, London, from 18th to 22nd April next, and Dr. H. V. Dicks, Consultant Psychiatrist at the Tavistock Clinic, who has been closely associated with Dr. John Bowlby and his work, will be the principal speaker. He will be assisted by Miss R. S. Addis, Head of the Social Services Department of the National Association for Mental Health, Dr. H. Martin James, Psychiatrist to the West Sussex Child Guidance Council, Dr. R. E. D. Markillie, Senior Registrar at the Tavistock Clinic, and Mr. W. J. Wheeler, M.A., Clinical Psychologist and Inspector of Child Care to the London County Council's Children's Department, who will act as Tutors.

Those who would like further particulars about this Seminar should write to The Medical Director, The Central Council for Health Education, Tavistock House, Tavistock Square, London, W.C.1. The inclusive fee will be four guineas.

NUTRITION COMMENTARY

The following article examines one of the most important of the new trends in child nutrition.

IN a country such as ours, where weaning goes on from the sixth month or so and where there is usually plenty of cow's milk, children of two years are reckoned to be over the worst hazards of infancy. The more interesting, then, that it is precisely upon this age that recent conferences of the United Nations health agencies have concentrated some attention. There is a new trend in nutritional research; partly, of course, it is due to our increasing medical familiarity with the children of the tropics and the sub-tropics. We shall be hearing more of this new trend of thought; for already it is discussed in a number of publications. Some aspects of it have, for instance, been reviewed in a recent survey of the conditions of pre-school children.[1] Books of this kind, by the way, show how wide in these days of the World Health Organisation are becoming the interests of medicine and nutrition. The reports of the League of Nations Nutrition Committee before the war had little to say about Africa and Latin America; the information was in any case scanty. Now we know far more; and the growing importance of their peoples is bringing these continents into prominence. We are at last thinking of the world's children as a whole and comparing one country with another.

The Weaning Stage

With most writers on the subject we may define the "pre-school child" as a child from about one year of age to five or six years; and if we do so, there are two facts we have to remember. The first is that in most of the countries of the world milk is still a very rare commodity (and safe milk is an even rarer commodity); the second is that in many parts of the world children are still being fed from the breast up to two or three years of age or further. One has to suppose in fact that weaning at six months or so is a comparatively modern invention. As far as we know, human mothers for some hundreds of thousands of years did what the African or Chinese mother frequently does today; they allowed a child to take the breast well

[1] Clark, F. Le Gros, *The Feeding of Pre-School Children—A Survey of a World Problem*. With a Foreword by Professor Richard W. B. Ellis. 1s. 6d. post free from The National Society of Children's Nurseries, 45, Russell Square, London, W.C.1.

into its second or third year. What happened then to the child's diet was critical for its wellbeing. It had presumably been consuming a variety of foods from the time it began to crawl. But it had at least been getting milk; and while the composition of the breast milk may have been changing as the months went by, we can assume that the child was daily consuming good protein and some calcium. When breast feeding ceased, most children had no other milk. Most children in China and Africa today have no other milk; their nutritional wellbeing depends on the mixture of foods they find available.

Under such conditions the weaning and post-weaning period of a child's life remains one of great significance; it may be critical for its chances of survival and for its prospects of a healthy life. We in Western Europe are apt to consider weaning as merely an interesting phase in a child's psychic development; in many other parts of the world it is one of the most serious hazards with which a child has to contend. For, after all, how much do we know as yet about the digestive and metabolic processses in the body of a young child ? A child comes into the world as a milk-sucking creature; and in time it matures into an omnivorous creature. The transition is a peculiar one and must be accompanied by many changes in the enzyme systems of the body. What those changes are and how they vary from child to child, we only suspect.

Most young mammals seem more or less to wean themselves. By the time the mother refuses her milk to them, they have begun to nibble the herbage or to tear at the meat she brings them. But the young infant is still dependent at weaning on maternal care and help in the matter of its food. Even if it can crawl or toddle before it leaves the breast, it has to rely on the food it is offered; and since it is human, it is affected by all the dietary notions and superstitions common to its group. In fact, there is no evidence that human beings ever possessed an "instinct" that would guide them in the proper weaning of their young; and when one considers the very strange and unhygienic weaning habits adopted in a number of tribes, one is surprised at moments that any children survive at all.

Child Mortalities

Yet they do obviously survive in sufficient numbers to replenish the tribe. What the survey before us makes clear is that in many countries the mortality among children of two or three years is still very high ; and while naturally many other causes of death are at work, the problem is whether the weaning and post-weaning period does not impose a special nutritional strain that intensifies the hazards arising from infection and infestation. In a chapter on the statistical shape of the problem, the writer gathers together the basic data, so far as they are reliable. In the advanced countries, he says, a child's earliest hazard falls not vaguely within the

first year or so of its life, but within the first month or so; it is then that such factors as prematurity and congenital debility or malformation are exerting their full influence. If a child survives this first month or so, its chances of life are good. But there are peoples among whom the dangers at the time of weaning seem as great as those experienced in the first few months of life; at times they are suspected to be even more serious. In many countries the death rates are high. For instance, in New Zealand and Sweden the death rates among children of one to four years are only 1.7 and 2.2 per thousand respectively; but in Mexico they are 48.2 and in Egypt 78.9. The years for which the figures were recorded are in all cases given. That much progress can be made is shown by the health records for our own country. For instance, in 1871-5 the death rate of children of 1-2 years was 59 per thousand, whereas in 1946 it had fallen to 3.47. No suggestion is made that the differences are due to better feeding alone; on the contrary, the other adverse or beneficial factors are given their full weight. But the researches of the last few years are showing that in some parts of the world the nutritional factor may be having an unexpectedly pervasive influence on child health. The question we have to ask ourselves is whether very young children are especially susceptible to certain deficiency conditions that seem to manifest themselves about the time of weaning. The conditions are not common before weaning, for the simple reason that, if the mother of a new-born infant dies, or is unable to provide breast milk, the chances are that the baby will not survive. The symptoms that have already been studied in children about the time of weaning are making us suspect that there may be many other conditions that have remained unrecognised—organic changes not serious enough to prove fatal, but sufficiently serious to impair vigour and health in later years. We are only in the early stages of our investigations; yet they have had the effect of concentrating our attention at last upon what several writers have called the "dark age" of childhood.

New Deficiencies

To add to the growing list of deficiency diseases with their strangely rustic names—scurvy and beriberi and rickets—we now have yet another with which to familiarise ourselves. It was in 1933 that Dr. Cecily Williams published a paper describing a disease common among young children of the Gold Coast. The skin was dry and scaly; the hands and feet were dropsical; and the hair was dry and often of a dull reddish colour. A post-mortem examination frequently revealed a fatty degeneration of the liver. The disease was most common among children of one to four years. It seemed to arise at weaning time and after a long period of breast-feeding. The local name for the condition was *kwashiorkor* or "red boy", either from the reddish colouring of the hair or because the child was

believed to be possessed by an evil spirit.

When war came, the regions of investigation had already broadened. The disease was found to be widespread throughout tropical Africa; and instances have now been traced in all parts of the world. The book under review summarises some of the evidence; and the subject has been recently surveyed by two medical writers, Dr. A. P. Meiklejohn and Dr. R. Passmore, in the *Annual Review of Medicine* (volume 2, 1951). "In the last ten years", they say, "reports from many parts of the world have shown beyond doubt that Williams was describing a disease not peculiar to any one people, or dependent on a local dietary habit or custom, but a condition that might arise amongst all races of mankind and result from a variety of dietary failures."

The symptoms of the complaint are frequently complicated with those of a variety of vitamin deficiences; but its basic origin now seems clear. We quote again from Meiklejohn and Passmore, though the study we are reviewing states the same facts in other words. "There is much evidence to suggest that deficiency of protein-rich foods is the primary cause of the disease. . . . Kwashiorkor occurs most frequently at that period of life when the active growing child has additional needs for protein, and among populations in which milk and other animal proteins are luxuries—for the most part unavailable to the children of the poor. It is also most commonly (but not invariably) found in peoples whose staple food is either maize or else one of the tropical roots such as cassava or manioca."

It is serious enough that a fair number of children are known to succumb; what the consequences are for the health of those who survive is still doubtful. They may be widespread, and they may affect not only the liver but possibly also the small intestines and the pancreas. Meanwhile, malaria, worm infestation and gastric infections are always contributing their share to the complex picture. How far they intensify the symptoms and how far they are intensified by the basic deficiency, we do not know. The lack of milk in the weaning diet is plainly the most prevalent cause; but the writers we are quoting all make it obvious that, important as milk may be, we need not rely on milk alone. Any good mixture of proteins would probably keep a child tolerably healthy, provided the diet contained a sufficiency of the essential minerals and vitamins in some form. Chinese mothers often feed their children with pre-chewed scraps of meat; and even a good mixture of bean curd and cereal porridge or gruel would probably supply a combination of proteins sufficient for the purpose. But milk is by all means the easiest and best way. It may yet be realised that the possession of a dependable milk supply is the main characteristic that distinguishes the more healthy countries of the world from those whose mortality and morbidity rates have not fallen appreciably over the last

fifty or hundred years.

Social Remedies

What we are to do about it all may be matter for surmise. The book we are reviewing devotes several pages to a discussion of solutions. "A child from one to three years", says the writer, "is in a stage of transition; and during that period it may have to meet nutritional shocks that could in theory be avoided but are often not avoided. If the world wishes to preserve the lives and health of numbers of these small children, we must recognise that this age group as a whole need special treatment; we must, that is to say, by a process of social instruction and by making available certain basic foods in a form that will be acceptable to the people, begin to close this gap in our defences."

"Dried milk", he later continues, "has, of course, been imported into various countries, mainly for relief feeding schemes, and there could be considerable quantities of skim milk at our disposal, there is no technical reason why permanent deliveries should not be instituted in at least a few countries." To make this clear, he surveys the present position of the skim milk industry in the world as a whole, and reaches the conclusion that the possible output, though still inadequate, might go some way to "close the gap". We are still, however, as all writers on the subject insist, confronted with a mass of ignorance and illiteracy, that may be slow to yield. It is here that our own interests in this Journal are especially engaged. The experience of relief workers in many countries has shown that dried skim milk is not a product that can be safely left in the hands of ill-educated and often unresponsive women. Their habits of life are inflexible, and their methods of preparation at times unhygienic.

A few tables and figures at the close of the survey set the problem briefly in its perspective; and we begin to recognise how varied are the paths we shall have to travel towards a solution.

BIOGRAPHICAL NOTES

ERIC C. DOWNER, M.A., D.P.H.,—Medical Officer of Health and School Medical Officer, Middlesbrough County Borough; Port Medical Officer, Tees Port Health Authority. Previously: Assistant Port Health Officer, Singapore; Surgeon Attendant, Royal Navy; M.O.H. at Chorley, Tipton, Rye, Barnsley. Author of several publications on the relation of family allowance schemes to public health (1938-39); *Chorley Borough Nutrition Service* (1939-40); *Contol of Poliomyelitis in a Rural Area* (1948); *Survey of Catering Establishments, Battle and Rye* (1949).

JOHN WHEELER, M.A.—Inspector of Child Care, Children's Department, London County Council. Spent some years teaching in various types of school and has held the following appointments: Rehabilitation and Resettlement Officer, Queen Victoria Hospital (Plastic Surgery Centre); Fellowship in Clinical Psychology (Child Guidance), Tavistock Clinic; Psychologist to the Central Council for Health Education. Hon. Psychologist, Napsbury Mental Hospital.

FILMS

A BROTHER FOR SUSAN. 1952. 16 and 35mm. Black and White. Sound. 13 mins. On free loan from Southall's Film Library, 269, Kingston Road, London, S.W.19. Prints may be purchased from the Educational Foundation for Visual Aids, 33, Queen Anne Street, London, W.1.

This film is intended as a sequel to *Growing Girls* and a certain amount of revision material is included.

Susan is an only child, and when she is fourteen her father and mother inform her that she must expect a baby brother or sister. The story gives a natural happy family background to a normal event. Animated diagrams show the liberation and fertilisation of the ovum and how it receives oxygen and nourishment from the placenta. The developing baby is seen at various stages; labour movements result in birth which is assisted by a trained nurse. During pregnancy the mother visits the clinic where she undergoes a medical examination and receives sound advice to continue her normal life, eat suitable food and take exercise. The final shots are of the whole family around the mother's bed and the baby's cot.

This film is exactly right for the eleven to thirteen age-group for which it is intended, and it does not assume any previous knowledge of physiology. It should give the young viewers a fearless, wholesome and matter-of-fact knowledge of an event which is of extreme interest to them. The commentary is clear and unobtrusive. L.E.H.

EXTERNAL RESPIRATION. 1951. 16 and 35 mm. Colour. Sound and mute. 13 mins. For sale or hire from Gaumont British Instructional Ltd., Aintree House, Perivale, Middlesex.

This film includes shots and animated diagrams of the structure and functions of the respiratory organs of man, including the nasal passages, trachea, lungs, diaphragm, and their movements in expiration and inspiration. Then follow animated diagrams of the gaseous interchange between the blood and air in the lungs with special reference to the structure and function of the air sacs.

This film is primarily intended for children of 13+ but the age-range could be extended considerably in the hands of a capable teacher. It would even serve as a valuable introduction to Pre-Nursing Course Students.

The diagrams and technique are of first rate quality, the teaching methods sound and the length of the film is just right for the age-group for which it was produced.

Very adequate teaching notes are provided. L.E.H.

INTERNAL RESPIRATION. 1951. 16 and 35 mm. Colour. Sound and mute. 8 mins. For sale or hire from Gaumont British Instructional Ltd., Aintree House, Perivale, Middlesex.

This short film shows the distribution of oxygen by means of the circulatory system, the release of energy within a muscle cell by means of the oxidation of food substances, the resulting formation of carbon-dioxide and water and the route of the blood carrying carbon-dioxide back to the heart and lungs. A brief revision of the method of bringing oxygen to the lungs by inspiration precedes the carrying of oxygen to every cell by means of the circulatory system and its use in the process of oxidation.

Animated diagrams of excellent quality are used throughout and the film is accompanied by adequate teaching notes. The production was for the 13+ age-group but a good physiologist could, with profit, extend the age-range upwards to about 15 +

The style and standard of this film are on the usual high level of the firm which produced it. L.E.H.

BOOK REVIEWS

HEALTH EDUCATION, by Cyril Bibby. (Wm. Heinemann Ltd. 1952. Pp. 222. Price 17s. 6d.)

Mr. Bibby's new book covers the main theoretical and practical aspects of health education. The chapter headings, which run 1. Aims, 2. Aspects, 3. Facts, 4. Media, 5. Home, 6 School, 7. College, 8. Community, indicate the range but are an unduly modest description of their content. The extensive appendices are intended as useful Guides for practical work and deal with such aspects as: An ontogenetic scheme for Health Education; Health Education through curriculum subjects; A health week; Seasonal planning of Health Education.

In not setting out to produce a manual of hygiene, Mr. Bibby has achieved something considerably more valuable and rare—a wise, useful and concise book. Those who are seriously concerned with health education will be grateful for his imaginative approach and the evidence of hard work on their behalf. The casual executive will find assistance with his immediate problems, and may stay to thumb the pages. The author's obvious awareness that humble practice is at least as valuable as inspiring theory will be welcome to both.

The manner and matter are clearly founded on a rich experience of people and things and an appreciation of the fact that it is administration which brings them together and makes them effective. Mr. Bibby's vitality and wide culture emerge throughout the book, and reveal how far health education is the vital link between science and the humanities.

JOHN BURTON.

COMMUNITY HEALTH EDUCATION IN ACTION, by Raymond S. Patterson and Beryl J. Roberts. (The C.V. Mosby Company, St. Louis, U.S.A. 1951. Pp. 346. Price $4.50)

This book covers the whole range of health education as practised in the United States of America, i.e., the functions of the health educator, the organisation of the community, theoretical aspects of the learning process, techniques of health education by word of mouth, visual methods, etc. It also contains useful hints on the production of material, approaching news editors, organising meetings, and the appraisal of work done. It is designed for adult health education, and does not deal with schools.

For a short book it contains much that the health educator needs to know in the way of up-to-date educational theory, and (what many books fail to do) it interprets this in a strictly practical manner. For British readers there is the inevitable difficulty of interpreting American social structure and facilities in terms of British practice, but if one reads "health visitor," "sanitary inspector" and "medical officer" for the American "health educator," bridging the gap is not so difficult.

The book is well bound and printed.

JOHN BURTON.

CANCER—WHERE WE STAND, by Sidney Russ. (Oxford University Press. 1950. Pp. 192. Illus. Price 10s. 6d.)

In a foreword, Lord Horder states that he has "always held that in projecting a campaign against cancer the help of the public should be sought." That is exactly the object of Professor Russ's book. There is no doubt that the public today are asking for more information concerning this disease, which, in spite of the increasing number each year of patients who are cured, still takes a terrible toll of life. This book satisfies much of that demand for knowledge.

As a professor of physics, the author does not attempt to describe the details of symptomatology, but deals with the subject on broad lines. He discusses the

nature of cancer and the present theories. He points out how it starts as a local overgrowth of cells spoken of as "primary," and that later this breaks up into small clusters of cells which are transported by the blood and lymph channels to other parts of the body and set up new colonies of cancer called "secondaries" or "metastases." It follows that whilst the "primary" remains in a localised condition the surgeon or radiotherapist has a problem with "definitely prescribed limits" the solution of which may be easy or difficult according to the position or exact type of the growth. When, however, the disease has progressed to the stage of "secondaries," the problem is very different.

After discussing the theories of origin, the author considers the prevalence of the disease, and statistics. Following on this the disease is discussed from many points of view, including that of heredity. A chapter is devoted to "occupational cancers," which happily are becoming a thing of the past. He tells the story of how these cancers were first recognised, a story which starts in 1775 and is full of interest.

Professor Russ then deals with methods of diagnosis, and the attempts, at present unsuccessful, to obtain some blood test, such as are used in certain other diseases.

The chapter on the early days of X-rays is written by an expert who has grown up with the amazingly rapid growth of this kind of treatment.

The chapter on research brings in the names of many brilliant British scientists, including Lord Rutherford, Bashford and others who are still living and continuing to advance our knowledge of the subject. Modesty prevents Professor Russ from mentioning his own contributions in this field, but they are well known to everybody interested in cancer. The role of physics in cancer is dealt with fully, but all branches of science (and there is none the help of which is not required in such a wide problem as cancer) are also mentioned.

The book is written in a lucid style, with a minimum of technical terms, and holds the interest of the reader throughout. There is no doubt that it will bring light and hope to people, of whom there are many, who have some apprehension concerning the disease cancer.

MALCOLM DONALDSON.

SYPHILIS AND GONORRHOEA, a Manual for the Medical Practitioner. (Venereal Diseases Control Division, Department of National Health and Welfare, Ottawa. 1951. Pp. 50.

It seems that in Canada the increasing use of antibiotics has created a tendency for the treatment of venereal diseases to revert from the Clinic to the private physician, who therefore now undertakes a larger measure of responsibility for the practical public health control of these diseases. In the preface to this booklet, Dr. Layton, Chief of the Canadian Venereal Disease Control Division, states that it has been prepared to fill what is regarded as a long existing need, and that it is intended chiefly for use by the busy practitioner who encounters venereal disease on relatively rare occasions and has neither the time nor the urgency to keep closely in touch with recent advances. Inevitably this condensed version of a considerable subject contains some sweeping statements which might not prove generally acceptable to many workers in this field. Nevertheless the section on syphilis is sound and up to date and should admirably achieve the purpose for which it is intended. As might be expected, it follows North American teaching very closely, and this is very fitting, for most of the original work in this subject has been done in the United States for years past, and it is there that antibiotics have been thoroughly tested and assessed in the treatment of syphilis. Readers in this country, however, may feel this admiration for transatlantic achievement is carried too far in the statement—"In 1943 Mahoney introduced penicillin as a potent thera-

peutic agent in syphilis." There is no doubt that this might have been more happily expressed. No aspect of syphilis is neglected and current teaching is presented clearly and concisely. A leaflet is included wnich gives excellent notes on some methods of treating the various stages of syphilis.

On the other hand the subject of gonorrhoea is confined to less than six pages and receives rather superficial treatment. Among the complications, prostatitis and iridocyclitis receive no mention. In speaking of the prophylaxis of gonococcal ophthalmia neonatorum no reference is made to the important first stage of the Credè procedure; and the second stage of the method, which many now regard as unsound, receives disproportionate emphasis. It is clear that the writer places great faith in the results of modern treatment of gonorrhoea, and this perhaps is responsible for the lack of recommendations concerning tests for cure, except that cultures from genital secretions are recommended in preference to smears. The final paragraph deals with a highly controversial subject—namely the practice of using large doses of penicillin in the treatment of gonorrhoea to abort syphilitic infection which may have been acquired concomitantly. This procedure is not directly advocated but inevitably the practitioner would be left with the impression that it is sound practice.

There is probably a good case for making available a similar booklet in this country, but it is to be hoped that, if this example is to be used as a model, the section on gonorrhoea will be rewritten entirely.

A. J. KING.

PATTERNS OF MARRIAGE, by Eliot Slater and Moya Woodside. (Cassell & Co. Ltd. 1951. Pp. 311. Price 17s. 6d.)

Fundamental research often emerges from the study of a narrow objective. The primary objective of Dr. Slater and Mrs. Woodside was to discover the existence of assortative mating with special reference to the neurotic personality. Two hundred married couples were interviewed, the field of enquiry covering their childhood and family background, courtship, physical and psychological aspects of their marriage relationship, occupation and social status, and attitudes to family life, children and abstract ideas. The husbands were Servicemen who were in-patients at two emergency hospitals in war-time London, and a random sampling method was used to select 100 neurotic subjects from the psychiatric casualties and 100 control subjects from the general surgical wards. The authors anticipate any criticism of the validity of their conclusions drawn from these samples, by explanations which are acceptable to all save the most rigid statisticians.

It is fair to say that the authors have made an important discovery in their identification of personality traits, which are invariably inimical to happiness in marriage. In addition they confirm by scientific observation the impressions which are gained by all shrewd and experienced social workers—for instance, the association of pre-marital chastity with a higher economic status and a well planned happy marriage, and the romantic unrealistic approach to marriage of the emotionally immature. The close association of physical and nervous health is confirmed, and the observation made that the neurotic child will usually become the neurotic adult. Any complacency regarding Birth Control Clinics will be dispelled on reading the findings on contraception!

The text includes many fascinating case histories and in an appendix are set out in tabular form the various statistical findings of the survey. The correlation chart which confirms the existence of assortative mating is particularly interesting. The chapter on Politics, Religion, and Values is least satisfying, possibly because the authors themselves seem unsatisfied with their views.

This is not only a study in social medicine, but a documentary commentary on life in our times—the observation that there is much talent in the population which cannot be used or expressed is disturbing. Although the authors' findings will doubtless await confirmation in larger surveys, there is much information here which could be put to use by all active workers in the field of social welfare.

A. J. DALZELL-WARD.

THE HEALTH OF EXECUTIVES. (Industrial Welfare Society, Inc., 48 Bryanston Square, London, W.1. 1951. Pp. 17. Price 1s.)

Mr. Cecil Roberts has written a very valuable pamphlet to indicate the sort of stress under which the modern executive officer works, and the dangers which this involves for his efficiency and health.

It is a subject which has not often been dealt with, and on which little research has been done, but no-one will disagree with the general thesis that the executive in a modern organisation is being subjected to increasing anxieties, more work, both qualitatively and quantitatively, and that where the labourer's job is on the whole becoming simpler, the executive's is becoming more complicated.

Perhaps the most valuable section of the booklet for reading by committees and employers is that on the early signs of breakdown and the necessity for taking preventive action if the health of the executive and the efficiency of the organisation are to be maintained.

JOHN BURTON.

FATS AND FIGURES, by Stephen Taylor. (André Deutsch, Ltd. 1951. Pp. 76. Price 6s.)

It is about time that a sensible book on "Fats and Figures" was written for the general public by a member of the medical profession. Dr. Stephen Taylor's book certainly arrives in time to fill that need, and being written in a very down to earth manner is easy to read and understand.

My only quarrel with Dr. Taylor is that, having stated in his first paragraph that the cause of fatness is eating too much, he devotes over a quarter of the book to instruction in various forms of exercise. As a busy woman, I am particularly irked at the suggestion that a minimum of ten minutes exercise per day is necessary, and I do not understand why in the circumstances there is such emphasis on good corsetry.

The slimming menus are probably very satisfactory, but because no specific quantities of food are given, they will be difficult to follow.

Apart from those minor grumbles, the book answers most of the questions which many of us would like to ask the doctor, and the replies are authoritive and satisfying. There is, however, one question I would like to ask Dr. Taylor: Why does he blame a baby boy for making mother fat? (page 34).

JOAN ROBINS.

UNLIKE THE ELEPHANT, by Sylvia Smeal. (Valentine, Mitchell & Co. Ltd., Astra Books. 1951. Pp. 88. Price 5s.)

Mrs. Smeal has obviously enjoyed writing this book. She makes no claim that it is anything other than a chronicle of her own, somewhat peculiar, reactions to a rather difficult pregnancy. Provided that it is accepted as such it makes amusing, instructive, but often rather morbid reading. It is certainly not a book to be read by the usual run of young women having their first baby. The last chapter, however, with its emphasis on the positive aspect and indeed the pleasure of the second stage of labour, is excellent.

ANGELA MACKAY.

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